



# ENVIRONMENTAL PRODUCT DECLARATION

Green buildings  
with powder-coated and decorated aluminium sheets

PCR 2019:14: Construction products, version 1.11

CPC CODE: 42190 - Other structures (except prefabricated buildings) and parts of structures, of iron, steel or aluminium; plates, rods, angles, shapes, sections, profiles, tubes and the like, prepared for use in structures, of iron, steel or aluminium; props and similar equipment for scaffolding, shuttering or pitpropping

PROGRAMME: The International EPD® System - [www.environdec.com](http://www.environdec.com)

PROGRAMME OPERATOR: EPD International AB

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GEOGRAPHICAL SCOPE: Global

*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](http://www.environdec.com).*



 **decoral** group®

 **EPD**®  
THE INTERNATIONAL EPD® SYSTEM





# LES DOCS

LES DOCS DE MARSEILLE CORPS SENTIMENTS ET MERVEILLE CHAQUE VALLE ENVIRONNANT PAR LEUR APPHONS BARONNIER NOUS FAISSENT NOMBREUX AMIS EN CONTRAINTES HIBERNIS  
DES BATIMENTS QUI PEUVENT ETRE QUALIFIES D'HEROQUES ET LEUR VISIBILITE DANS LE PAYSAGE AIENT LEUR APHONS BARONNIER DE ARRIVE EN LA JOURNEE MAIS SONT  
PERENNITE DEFINIS PAR LEURS DIMENSIONS PHYSIQUES ET LEUR VISIBILITE DANS LE PAYSAGE AIENT LEUR APHONS BARONNIER DE ARRIVE EN LA JOURNEE MAIS SONT  
UNE GRANDE PARTIE D'ENTRE EUX A ETE CONSTRUITS A DES EPOQUES DIVERSES CONTAINANT DES DISPOSITIFS D'APPREHENSION LA VILLE  
DES BATIMENTS PERSISTENT ANS COTES ET SONT AUTAN DE MOYENS D'APPREHENSION LA VILLE  
LEUR DIMENSION QUE NOUS APPELONS «HEROQUE» EST UNE ET INCORPORÉ A PEU DE DOCS DE MARSEILLE  
DES BATIMENTS SAVENT CONCILIER LES CONTRASTES QU'ILS PEUVENT EXISTER ENTRE LEUR CORPS ET  
LEUR AMBANTE DE RENOMER LEUR DIMENSION QUE NOUS APPELONS «HEROQUE» EST UNE ET INCORPORÉ A PEU DE DOCS DE MARSEILLE  
ET AVANT DE S'APPROCHER D'UNE ENIGME COMME ON OCCUPRE UN SECRET BIEN QUE IL SEMBLE AVOIR  
AUTRES NATURES D'AUTRES RELATIONS D'AUTRES INTIMITES DE VAIT ETRE RENOMME  
LE BATIMENT SE VIT AVANT TOUT COMME UNE LIMITE PHYSIQUE LIMITE ENTRE LEST  
NOUVELLE VILLE CONTIENNE LE CENTRE HISTORIQUE ET LA MER L'HORIZON LIMITE ENTRE LEST  
PEUT EXCELLENCE CE BATIMENT DOIT PEUVER LE RÔLE DE «FILTRER» DANS LA CONTINUITÉ DE SA  
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## PROGRAMME INFORMATION

Programme: The International EPD® System  
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Product category rules (PCR):  
PCR 2019:14 Construction products, version 1.11

PCR review was conducted by:  
*The Technical Committee of the International EPD® System. See [www.environdec.com/TC](http://www.environdec.com/TC) for a list of members. Review chair: Claudia A. Peña, University of Concepción, Chile. The review panel may be contacted via the Secretariat [www.environdec.com/contact](http://www.environdec.com/contact).*

CEN standard EN 15804 serves as the core PCR

Independent third-party verification of the declaration and data, according to ISO 14025:2010:

External  Internal

covering:

EPD process certification  EPD verification

Third party verifier: RINA Service S.p.A. – via Corsica 12, 16128 Genova (GE)  
[www.rina.org](http://www.rina.org)

Accredited by: Accredia 001H

Procedure for follow-up during EPD validity involves third party verifier:

Yes  No

*The EPD owner has the sole ownership, liability and responsibility of the EPD.  
ISO 14025: "EPDs within the same product category but from different programmes may not be comparable."  
EN 15804: "EPDs of construction products may not be comparable if they do not comply with EN 15804."*

## GENERAL INFORMATION

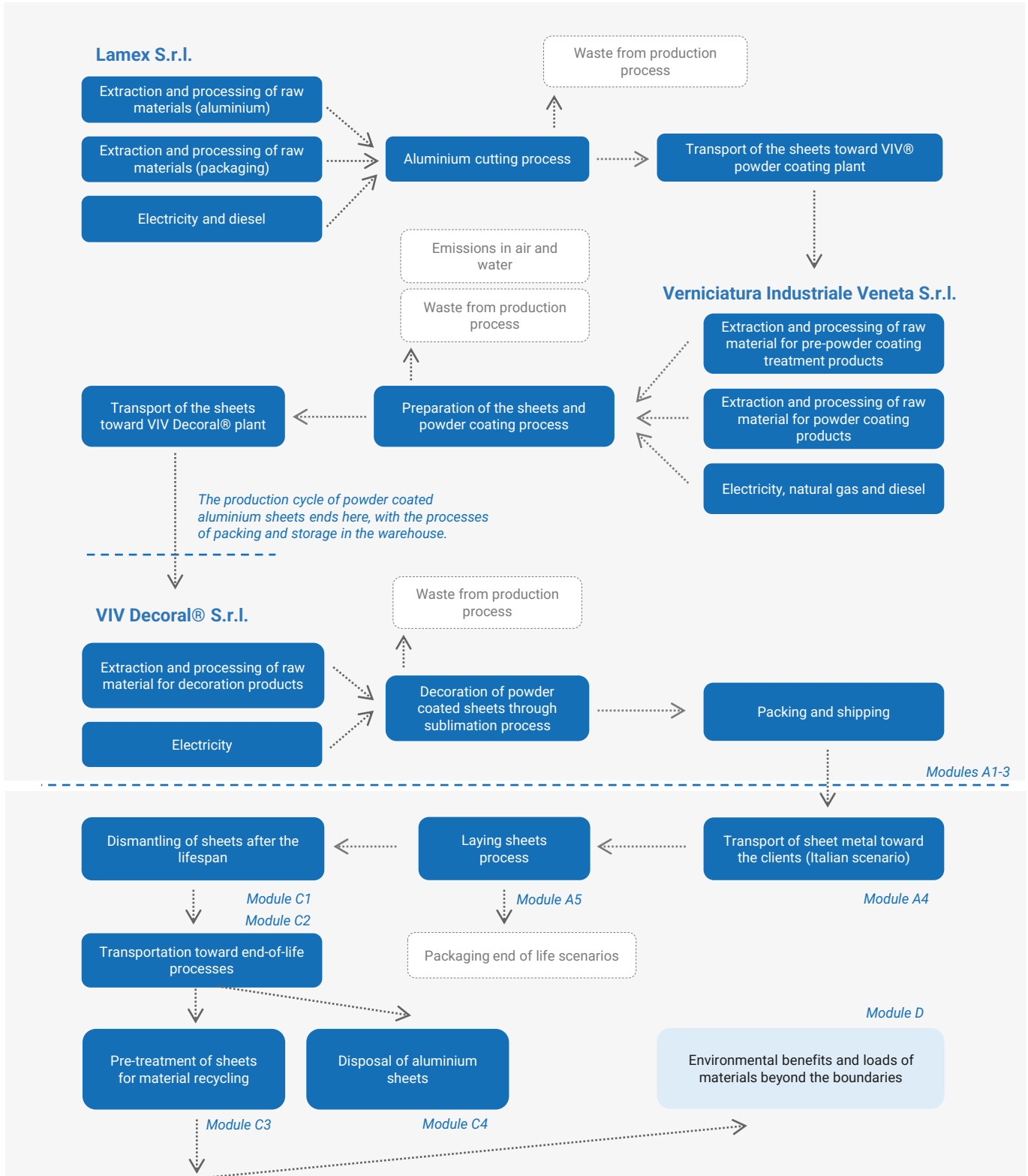
### EPD OWNER

© Decoral® Holding srl  
Viale del Lavoro 5, Arcole (VR) - Italia



**Decoral® Group** is a leading Italian group in the field of metal surface treatment, well known all over the world. The Group have specialized in anodizing as well as painted and decorated finishes for construction and architecture since 1974. It has always been committed to delivering high-quality products certified by the main international quality labels. In 1995, the Group invented and patented the decoration technology to create wood grain finishes on aluminum. It deals with every single stage of metal treatment, including also the production of coating powders, manufacture of steel safety windows and doors, and sale of sublimation equipment.

**PRODUCTION PROCESS**





**Lamex** is a company part of **Decoral® Group** based in Arcole (Verona, Italy) that deals with the treatment and distribution of aluminium sheets and products for architecture, more precisely ventilated facades, wall and floor systems, aluminum coils and profiles. Lamex products can be painted and decorated by Group companies.

**Verniciatura Industriale Veneta** is a **Decoral® Group** Company based in Cazzano di Tramigna (Verona, Italy). It is specialized in powder coating on aluminium extruded products, laminates and accessories. Verniciatura Industriale Veneta holds **Qualicoat** license. Moreover, it is **ISO9001:2015** certified.

**Viv Decoral®** With its subsidiaries in Verona, Rome and Turin, specializes in aluminum coating and sublimation. It is part of the **Decoral® Group**, an international benchmark in metal surface treatment since 1974. It has always invested in environmental-friendly production processes, focusing on the principle of circularity. **Qualicoat** and **Qualideco** licenses ensure high quality of processes, while manufactured products are guaranteed by the company self-certification system, namely **QualityDecoral® Platinum**, **QualityDecoral® Gold** and **QualityDecoral® Silver**. In terms of safety, finished products are fire rated **A2-s1,d0**, which means that they are non-combustible.

## PRODUCT INFORMATION

### ANALYZED PRODUCTS

1 m<sup>2</sup> of powder coated aluminium sheet and 1 m<sup>2</sup> of decorated aluminium sheet with different thicknesses: 0,6 mm – 0,7 mm – 0,8 mm – 1,0 mm – 1,2 mm – 1,5 mm – 2,0 mm – 2,5 mm – 3,0 mm – 3,5 mm – 4,0 mm

### UN CPC CODE

**42190** - Other structures (except prefabricated buildings) and parts of structures, of iron, steel or aluminium; plates, rods, angles, shapes, sections, profiles, tubes and the like, prepared for use in structures, of iron, steel or aluminium; props and similar equipment for scaffolding, shuttering or pitpropping.

### GEOGRAPHICAL AREA

Global

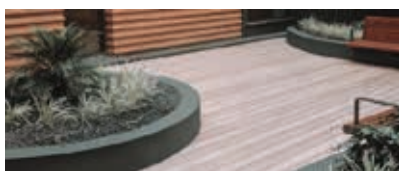
### PRODUCTS USE

The products have several uses and they are applicable for both external and internal use. Possible applications are in:



Architecture

- Facade
- Doors and windows
- Ceilings
- Coatings for exteriors
- Balconies and sunscreens



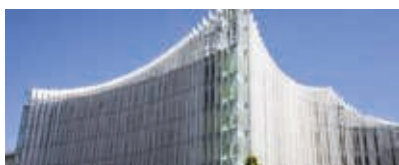
Furniture and design

- Internal coatings
- Indoor furniture
- Outdoor furniture
- Contract furniture
- Lighting technology



Transport

- Naval
- Airplane
- Railway
- Automotive



Public products

- Urban furniture
- Street furniture
- Playgrounds
- Sport equipment



ANALYZED PRODUCTS | POWDER COATED ALUMINIUM SHEETS



(Nuvola Lavazza, Torino)

ANALYZED PRODUCTS | DECORATED ALUMINIUM SHEETS



(Michurinsky Prospekt Metropolitana, Mosca)

## CERTIFICATIONS

Sustainability, innovation and quality are the core values that guide daily choices. **Decoral<sup>®</sup> Group** is strongly committed to reduce the impact of human activities on the environment.

**Decoral<sup>®</sup> Group** has contributed with its painted and decorated products to the achievement of **LEED<sup>®</sup>**, **BREEAM<sup>®</sup>** and **WELL<sup>®</sup>** certifications of many buildings in Italy and around the world.

VOC free painted and decorated products are certified according to ISO 16000 and IAC GOLD standards. They meet the requirements set by LEED<sup>®</sup> v4 and Minimum Environmental Criteria (CAM) of the Public Administration. Moreover, in accordance with French VOC regulations, Decoral<sup>®</sup> Group and VIV products are classed A+.



**LEED<sup>®</sup> BREEAM<sup>®</sup> WELL<sup>®</sup>**

**CAM**

Criteria Ambientali Minimi  
della Pubblica Amministrazione



Materiale da costruzione non combustibile  
secondo la norma UNI EN 13501-1:2019,  
non emette fumo o gocce ardenti in caso di incendio.

**NON COMBUSTIBILE**

CLASSIFICAZIONE A2 - s1, d0

# LCA METHODOLOGY

## DECLARED UNIT

1 m<sup>2</sup> of powder coated aluminium sheet and 1 m<sup>2</sup> of decorated aluminium sheet

## TIME REPRESENTATIVENESS

Primary data used in the LCA study refer to a period of 12 months, considering the production processes of the reference year 2020

## DATABASE AND SOFTWARE

Database: Ecoinvent 3.8  
LCA Software: SimaPro, version 9.3.0.3.

## SYSTEM BOUNDARIES

"cradle-to-gate with options" system boundaries  
Modules from A1 to A5, from C1 to C4 and the module D are included, in accordance with the PCR and the standard EN 15804:2012+A2:2019.

The products do not contain chemicals included in the SVHC list.

	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	MND	MND	MND	MND	MND	MND	MND	X	X	X	X	X
Geography	EU27	EU27	IT	GLO	GLO								GLO	GLO	GLO	GLO	GLO
Specific data used	> 90%																
Variation - products	not relevant																
Variation - sites	not relevant																

*System boundaries*  
"X" = included in the study  
"MND" = module not declared

### CONTENT DECLARATION INCLUDING PACKAGING

Product components – 1 m <sup>2</sup> (declared unit)			
Product components	Weight (kg)	Post-consumer material, weight -%	Renewable material, weight -%
Coated powder / decorated aluminium sheet thickness 0,6 mm	1,62	30%	0%
Coated powder / decorated aluminium sheet thickness 0,7 mm	1,89	30%	0%
Coated powder / decorated aluminium sheet thickness 0,8 mm	2,16	30%	0%
Coated powder / decorated aluminium sheet thickness 1 mm	2,70	30%	0%
Coated powder / decorated aluminium sheet thickness 1,2 mm	3,24	30%	0%
Coated powder / decorated aluminium sheet thickness 1,5 mm	4,05	30%	0%
Coated powder / decorated aluminium sheet thickness 2 mm	5,40	30%	0%
Coated powder / decorated aluminium sheet thickness 2,5 mm	6,75	30%	0%
Coated powder / decorated aluminium sheet thickness 3 mm	8,10	30%	0%
Coated powder / decorated aluminium sheet thickness 3,5 mm	9,45	30%	0%
Coated powder / decorated aluminium sheet thickness 4 mm	10,8	30%	0%
Packaging materials	Weight (kg)	Weight-% (versus the product)	
Polyethylene	0,066	1% - 4%	
Wood	0,170	2% - 10%	

*The recycled content is based on the supplier's declaration.*

### CUT-OFF CRITERIA AND ALLOCATION

From the boundaries are **excluded** the activities that do not significantly affect the life cycle of products, such as (i) the office and commercial activities (administration, R & D / design, procurement, etc.), (ii) the movement of workers to and from the workplace, (iii) cleaning activities, (iv) construction and extraordinary maintenance of machinery and plants.

According to EN 15804, life cycle inventory data includes a minimum of 95% of total inflows (mass and energy) per module.

An **allocation** based on the surface of the sheets (produced in the reference year) was used for the calculation of air/water emissions, waste production, consumption of energy and water carriers.

## SCENARIOS AND TECHNICAL INFORMATION

The life cycle study of powder coated and decorated aluminium sheets includes all the relevant process units with a key role in identifying the environmental impacts.

### PRODUCTION STAGE

**Module A1**, “raw material supply”, estimates the environmental impact generated by the processing of raw materials for:

- Powder coated and decorated aluminium sheets;
- Energy / water carriers.

**Module A2**, “transport of raw materials”, estimates the impact generated by the transport of raw materials and semi-finished products used for the manufacturing of declared unit from the manufacturers to the Decoral Group® warehouse.

**Module A3** describes the “core” activities of Decoral Group® plants where the production of powder coated and decorated sheets is based. The process begins with the cutting of laminated aluminium sheets and continues with the painting, the decoration and the packing of the declared unit.

### CONSTRUCTION STAGE

**Module A4** includes the road transport of declared unit (1 m<sup>2</sup> of aluminium sheet and its packaging) to the installation site. Distances are based on sales in 2020, focusing the analysis on shipments to various Italian provinces, United Kingdom, Florida (USA) and Sydney (Australia) for a global scenario.

**Module A5** analyzes the installation process of 1 m<sup>2</sup> of aluminium sheet on site (considering the global context). The waste treatment of packaging after the installation process is considered in module A5, while environmental benefits and burdens of recycling / energy recovery were included in module D.

### END OF LIFE STAGE

**Module C1** analyzes the removing process of declared unit at the end of its lifespan or at the end of the building’s life in which it is installed. Removal is done manually by specialized staff.

**Module C2** includes the road transport of the declared unit to the waste treatment center for recycling, energy recovery, or for final disposal in landfill.

**Module C3** analyzes waste preparation and treatment processes until the declared unit reaches the state of waste, to be subsequently transformed through recycling or energy recovery.

**Module C4** includes landfill process of a small amount of the declared unit.

### MODULE D

**Module D** includes the potential environmental benefits and loads related to the recovery and the recycling processes of the declared unit.

The environmental benefits and the burdens considered in module D originate from the recycling or from the incineration of packaging and from the recycling of the declared unit.

PARAMETERS A4- A5	VALUES
A4 - A5   Type of fuels	Diesel
A4   Transport distance	Average distance based on clients
A5   Transport distance	50 km
A4 - A5   Type of transport	Lorry, EURO 4
A4 - A5   Load capacity (including empty return trips)	5,79 ton (efficiency 37%)
A5   Plastic packaging end-of-life scenarios (Italy)	44,5% - Recycle 43% - Energy recovery 12,50% - Disposal
A5   Plastic packaging end-of-life scenarios (UK)	44,2% - Recycle 41,9% - Energy recovery 13,90% - Disposal
A5   Plastic packaging end-of-life scenarios (Florida)	1% - Recycle 99% - Disposal
A5   Plastic packaging end-of-life scenarios (Australia)	14% - Recycle 3% - Energy recovery 83% - Disposal
A5   Wood packaging end-of-life scenarios (Italy)	64,68% - Recycle 35,32% - Disposal
A5   Wood packaging end-of-life scenarios (UK)	44% - Recycle 66% - Disposal
A5   Wood packaging end-of-life scenarios (Florida)	21% - Recycle 79% - Disposal
A5   Wood packaging end-of-life scenarios (Australia)	37% - Recycle 63% - Disposal

PARAMETERS C2- C3- C4	VALUES
C2   Type of fuels	Diesel
C2   Transport distance	50 km
C2   Type of transport	Lorry, EURO 4
C2   Load capacity (including empty return trips)	5,79 ton (efficiency 37%)
C3 - C4   Aluminium end-of-life scenarios (global)	90% - Recycle 10% - Disposal

## ENVIRONMENTAL PERFORMANCE

### 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 0,6 mm - 1,62 kg/m<sup>2</sup>

#### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,6 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	8,21E+00	2,22E-02	1,22E-02	0,00E+00	5,76E-03	1,06E-02	1,30E-03	-7,81E-02
Climate change – Fossil	kgCO <sub>2</sub> eq	8,61E+00	2,22E-02	6,04E-03	0,00E+00	5,76E-03	1,05E-02	1,30E-03	-4,29E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,65E-01	6,97E-06	6,20E-03	0,00E+00	1,84E-06	2,73E-01	5,89E-06	3,53E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	6,40E-02	1,97E-07	4,38E-06	0,00E+00	4,73E-08	4,66E-07	3,32E-08	-1,56E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	8,51E+00	2,21E-02	9,72E-03	0,00E+00	5,73E-03	1,03E-02	1,28E-03	-4,08E-01
Ozone depletion	kgCFC11eq	1,34E-06	5,18E-09	7,75E-10	0,00E+00	1,36E-09	1,59E-09	2,74E-10	-2,73E-08
Acidification	mol H+eq	5,20E-02	1,63E-04	2,45E-05	0,00E+00	2,59E-05	5,78E-05	1,35E-05	-1,46E-03
Eutrophication, freshwater	kg P eq	3,38E-04	1,16E-08	1,08E-07	0,00E+00	3,11E-09	2,19E-07	3,96E-09	-9,98E-06
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,04E-03	3,57E-08	3,33E-07	0,00E+00	9,54E-09	6,71E-07	1,21E-08	-3,07E-05
Eutrophication, marine	kg N eq	6,57E-03	5,12E-05	9,53E-06	0,00E+00	9,55E-06	1,59E-05	5,89E-06	-5,87E-04
Eutrophication, terrestrial	mol N eq	6,74E-02	5,65E-04	8,23E-05	0,00E+00	1,05E-04	1,76E-04	6,47E-05	-3,77E-03
Photochemical ozone formation	kg NMVOCeq	2,36E-02	1,46E-04	2,55E-05	0,00E+00	2,72E-05	4,91E-05	1,79E-05	-2,73E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	2,61E-04	8,96E-10	9,93E-09	0,00E+00	2,52E-10	2,17E-10	6,32E-11	2,85E-07
Resource use, fossils <sup>2</sup>	MJ	1,36E+02	3,10E-01	6,56E-02	0,00E+00	8,11E-02	1,57E-01	1,74E-02	-1,17E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	2,98E+00	-5,12E-05	1,02E-03	0,00E+00	-1,28E-05	2,06E-03	6,52E-06	-8,34E-02

#### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,6 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	3,85E-07	2,13E-09	3,94E-10	0,00E+00	5,94E-10	7,53E-10	3,59E-10	-2,96E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	4,96E-01	1,35E-03	2,24E-04	0,00E+00	3,52E-04	4,18E-04	7,37E-05	1,88E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	1,89E+02	1,33E-01	5,04E-02	0,00E+00	3,57E-02	5,30E-02	7,75E-03	-2,81E+00
Human toxicity, cancer <sup>2</sup>	CTUh	1,40E-08	2,08E-12	8,05E-12	0,00E+00	4,98E-13	8,90E-13	1,03E-13	4,43E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	3,05E-07	2,50E-10	6,49E-11	0,00E+00	6,97E-11	4,09E-11	1,20E-11	-4,25E-09
Land use <sup>2</sup>	Pt	6,54E+01	8,37E-04	1,55E-02	0,00E+00	2,22E-04	5,72E-03	2,14E-02	-1,30E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,6 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	2,90E+01	4,70E-04	4,30E-03	0,00E+00	1,24E-04	8,07E-03	4,95E-05	-5,30E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,18E+01	4,70E-04	4,30E-03	0,00E+00	1,24E-04	8,07E-03	4,95E-05	-5,30E+00
PENRE	MJ	1,17E+02	3,10E-01	6,56E-02	0,00E+00	8,11E-02	1,57E-01	1,74E-02	-1,17E+01
PENRM	MJ	1,97E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,36E+02	3,10E-01	6,56E-02	0,00E+00	8,11E-02	1,57E-01	1,74E-02	-1,17E+01
Use of secondary material	kg	1,30E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	1,84E-01	9,21E-07	2,97E-05	0,00E+00	2,53E-07	5,54E-05	3,54E-07	-4,28E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,6 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1,53E-02	7,60E-07	1,63E-07	0,00E+00	2,13E-07	1,93E-07	4,42E-08	-4,57E-05
Non-hazardous waste disposed	kg	1,06E+00	1,34E-05	7,03E-02	0,00E+00	3,66E-06	6,24E-05	5,21E-01	1,46E-01
Radioactive waste disposed	kg	4,94E-04	2,22E-06	3,15E-07	0,00E+00	5,80E-07	5,65E-07	1,21E-07	1,45E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,6 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	1,46E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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



## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 0,6 mm - 1,62 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 0,6 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	8,51E+00	2,22E-02	1,22E-02	0,00E+00	5,76E-03	1,06E-02	1,30E-03	-1,12E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	8,91E+00	2,22E-02	6,04E-03	0,00E+00	5,76E-03	1,05E-02	1,30E-03	-4,64E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,65E-01	6,97E-06	6,20E-03	0,00E+00	1,84E-06	2,73E-01	5,89E-06	3,54E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	6,88E-02	1,97E-07	4,38E-06	0,00E+00	4,73E-08	4,66E-07	3,32E-08	-1,56E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	8,81E+00	2,21E-02	9,72E-03	0,00E+00	5,73E-03	1,03E-02	1,28E-03	-4,42E-01
Ozone depletion	kgCFC11eq	1,38E-06	5,18E-09	7,75E-10	0,00E+00	1,36E-09	1,59E-09	2,74E-10	-2,77E-08
Acidification	mol H+eq	5,32E-02	1,63E-04	2,45E-05	0,00E+00	2,59E-05	5,78E-05	1,35E-05	-1,57E-03
Eutrophication, freshwater	kg P eq	3,47E-04	1,16E-08	1,08E-07	0,00E+00	3,11E-09	2,19E-07	3,96E-09	-1,01E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,06E-03	3,57E-08	3,33E-07	0,00E+00	9,54E-09	6,71E-07	1,21E-08	-3,09E-05
Eutrophication, marine	kg N eq	6,78E-03	5,12E-05	9,53E-06	0,00E+00	9,55E-06	1,59E-05	5,89E-06	-6,06E-04
Eutrophication, terrestrial	mol N eq	6,97E-02	5,65E-04	8,23E-05	0,00E+00	1,05E-04	1,76E-04	6,47E-05	-3,99E-03
Photochemical ozone formation	kg NMVOCeq	2,44E-02	1,46E-04	2,55E-05	0,00E+00	2,72E-05	4,91E-05	1,79E-05	-2,85E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	2,61E-04	8,96E-10	9,93E-09	0,00E+00	2,52E-10	2,17E-10	6,32E-11	2,85E-07
Resource use, fossils <sup>2</sup>	MJ	1,42E+02	3,10E-01	6,56E-02	0,00E+00	8,11E-02	1,57E-01	1,74E-02	-1,30E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	3,09E+00	-5,12E-05	1,02E-03	0,00E+00	-1,28E-05	2,06E-03	6,52E-06	-1,16E-01

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 0,6 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	3,91E-07	2,13E-09	3,94E-10	0,00E+00	5,94E-10	7,53E-10	3,59E-10	-3,08E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	5,07E-01	1,35E-03	2,24E-04	0,00E+00	3,52E-04	4,18E-04	7,37E-05	1,87E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	1,91E+02	1,33E-01	5,04E-02	0,00E+00	3,57E-02	5,30E-02	7,75E-03	-2,77E+00
Human toxicity, cancer <sup>2</sup>	CTUh	1,41E-08	2,08E-12	8,05E-12	0,00E+00	4,98E-13	8,90E-13	1,03E-13	4,42E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	3,06E-07	2,50E-10	6,49E-11	0,00E+00	6,97E-11	4,09E-11	1,20E-11	-4,31E-09
Land use <sup>2</sup>	Pt	6,60E+01	8,37E-04	1,55E-02	0,00E+00	2,22E-04	5,72E-03	2,14E-02	-1,30E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 0,6 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	2,95E+01	4,70E-04	4,30E-03	0,00E+00	1,24E-04	8,07E-03	4,95E-05	-5,30E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,23E+01	4,70E-04	4,30E-03	0,00E+00	1,24E-04	8,07E-03	4,95E-05	-5,30E+00
PENRE	MJ	1,22E+02	3,10E-01	6,56E-02	0,00E+00	8,11E-02	1,57E-01	1,74E-02	-1,30E+01
PENRM	MJ	2,05E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,42E+02	3,10E-01	6,56E-02	0,00E+00	8,11E-02	1,57E-01	1,74E-02	-1,30E+01
Use of secondary material	kg	1,30E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	1,86E-01	9,21E-07	2,97E-05	0,00E+00	2,53E-07	5,54E-05	3,54E-07	-8,45E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 0,6 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1,53E-02	7,60E-07	1,63E-07	0,00E+00	2,13E-07	1,93E-07	4,42E-08	-4,58E-05
Non-hazardous waste disposed	kg	1,07E+00	1,34E-05	7,03E-02	0,00E+00	3,66E-06	6,24E-05	5,21E-01	1,46E-01
Radioactive waste disposed	kg	5,06E-04	2,22E-06	3,15E-07	0,00E+00	5,80E-07	5,65E-07	1,21E-07	1,43E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 0,6 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	1,46E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

**ACRONYMS**

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**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

## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 0,7 mm – 1,89 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,7 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	8,85E+00	2,55E-02	1,22E-02	0,00E+00	6,72E-03	1,24E-02	4,73E-04	-1,54E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	9,23E+00	2,54E-02	6,04E-03	0,00E+00	6,72E-03	1,22E-02	4,71E-04	-5,06E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,56E-01	7,99E-06	6,20E-03	0,00E+00	2,15E-06	2,73E-01	2,12E-06	3,54E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	7,33E-02	2,26E-07	4,38E-06	0,00E+00	5,51E-08	5,44E-07	1,20E-08	-1,54E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	9,13E+00	2,53E-02	9,72E-03	0,00E+00	6,68E-03	1,20E-02	4,63E-04	-4,81E-01
Ozone depletion	kgCFC11eq	1,40E-06	5,93E-09	7,75E-10	0,00E+00	1,58E-09	1,86E-09	9,93E-11	-2,85E-08
Acidification	mol H+eq	5,70E-02	1,87E-04	2,45E-05	0,00E+00	3,03E-05	6,75E-05	4,90E-06	-1,70E-03
Eutrophication, freshwater	kg P eq	3,76E-04	1,33E-08	1,08E-07	0,00E+00	3,62E-09	2,55E-07	1,44E-09	-1,21E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,15E-03	4,09E-08	3,33E-07	0,00E+00	1,11E-08	7,84E-07	4,41E-09	-3,71E-05
Eutrophication, marine	kg N eq	7,07E-03	5,87E-05	9,53E-06	0,00E+00	1,11E-05	1,86E-05	2,14E-06	-6,34E-04
Eutrophication, terrestrial	mol N eq	7,33E-02	6,47E-04	8,23E-05	0,00E+00	1,22E-04	2,06E-04	2,34E-05	-4,32E-03
Photochemical ozone formation	kg NMVOCeq	2,57E-02	1,67E-04	2,55E-05	0,00E+00	3,18E-05	5,73E-05	6,51E-06	-3,10E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	3,01E-04	1,03E-09	9,93E-09	0,00E+00	2,94E-10	2,53E-10	2,29E-11	2,84E-07
Resource use, fossils <sup>2</sup>	MJ	1,46E+02	3,55E-01	6,56E-02	0,00E+00	9,46E-02	1,84E-01	6,33E-03	-1,34E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	3,16E+00	-5,87E-05	1,02E-03	0,00E+00	-1,49E-05	2,41E-03	2,36E-06	-1,08E-01

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,7 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	4,25E-07	2,44E-09	3,94E-10	0,00E+00	6,93E-10	8,79E-10	1,30E-10	-3,29E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	5,54E-01	1,54E-03	2,24E-04	0,00E+00	4,11E-04	4,88E-04	2,67E-05	2,03E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	2,11E+02	1,53E-01	5,04E-02	0,00E+00	4,17E-02	6,19E-02	2,81E-03	-4,09E+00
Human toxicity, cancer <sup>2</sup>	CTUh	1,56E-08	2,38E-12	8,05E-12	0,00E+00	5,81E-13	1,04E-12	3,73E-14	5,13E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	3,45E-07	2,87E-10	6,49E-11	0,00E+00	8,13E-11	4,78E-11	4,34E-12	-5,09E-09
Land use <sup>2</sup>	Pt	6,64E+01	9,58E-04	1,55E-02	0,00E+00	2,58E-04	6,68E-03	7,75E-03	-1,30E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,7 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	3,18E+01	5,38E-04	4,30E-03	0,00E+00	1,45E-04	9,42E-03	1,80E-05	-5,27E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,47E+01	5,38E-04	4,30E-03	0,00E+00	1,45E-04	9,42E-03	1,80E-05	-5,27E+00
PENRE	MJ	1,26E+02	3,55E-01	6,56E-02	0,00E+00	9,46E-02	1,84E-01	6,33E-03	-1,34E+01
PENRM	MJ	1,97E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,46E+02	3,55E-01	6,56E-02	0,00E+00	9,46E-02	1,84E-01	6,33E-03	-1,34E+01
Use of secondary material	kg	1,51E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	2,05E-01	1,05E-06	2,97E-05	0,00E+00	2,94E-07	6,47E-05	1,28E-07	-5,74E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,7 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1,77E-02	8,71E-07	1,63E-07	0,00E+00	2,49E-07	2,26E-07	1,60E-08	-5,26E-05
Non-hazardous waste disposed	kg	1,18E+00	1,53E-05	7,03E-02	0,00E+00	4,26E-06	7,29E-05	1,89E-01	1,71E-01
Radioactive waste disposed	kg	5,47E-04	2,54E-06	3,15E-07	0,00E+00	6,76E-07	6,60E-07	4,39E-08	1,57E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,7 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	1,70E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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**PERM** = Use of renewable primary energy resources used as raw materials

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**PENRM** = Use of non-renewable primary energy resources used as raw materials

**PENRT** = Total use of non-renewable primary energy re-sources

## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 0,7 mm - 1,89 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 0,7 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	9,16E+00	2,55E-02	1,22E-02	0,00E+00	6,72E-03	1,24E-02	4,73E-04	-1,54E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	9,53E+00	2,54E-02	6,04E-03	0,00E+00	6,72E-03	1,22E-02	4,71E-04	-5,06E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,55E-01	7,99E-06	6,20E-03	0,00E+00	2,15E-06	2,73E-01	2,12E-06	3,54E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	7,81E-02	2,26E-07	4,38E-06	0,00E+00	5,51E-08	5,44E-07	1,20E-08	-1,54E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	9,43E+00	2,53E-02	9,72E-03	0,00E+00	6,68E-03	1,20E-02	4,63E-04	-4,81E-01
Ozone depletion	kgCFC11eq	1,44E-06	5,93E-09	7,75E-10	0,00E+00	1,58E-09	1,86E-09	9,93E-11	-2,85E-08
Acidification	mol H+eq	5,83E-02	1,87E-04	2,45E-05	0,00E+00	3,03E-05	6,75E-05	4,90E-06	-1,70E-03
Eutrophication, freshwater	kg P eq	3,84E-04	1,33E-08	1,08E-07	0,00E+00	3,62E-09	2,55E-07	1,44E-09	-1,21E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	6,82E-02	5,89E-04	7,28E-05	0,00E+00	1,11E-04	1,87E-04	2,13E-05	-3,69E-03
Eutrophication, marine	kg N eq	7,28E-03	5,87E-05	9,53E-06	0,00E+00	1,11E-05	1,86E-05	2,14E-06	-6,34E-04
Eutrophication, terrestrial	mol N eq	7,55E-02	6,47E-04	8,23E-05	0,00E+00	1,22E-04	2,06E-04	2,34E-05	-4,32E-03
Photochemical ozone formation	kg NMVOCeq	2,64E-02	1,67E-04	2,55E-05	0,00E+00	3,18E-05	5,73E-05	6,51E-06	-3,10E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	3,01E-04	1,03E-09	9,93E-09	0,00E+00	2,94E-10	2,53E-10	2,29E-11	2,84E-07
Resource use, fossils <sup>2</sup>	MJ	1,52E+02	3,55E-01	6,56E-02	0,00E+00	9,46E-02	1,84E-01	6,33E-03	-1,34E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	3,27E+00	-5,87E-05	1,02E-03	0,00E+00	-1,49E-05	2,41E-03	2,36E-06	-1,08E-01

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 0,7 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	4,31E-07	2,44E-09	3,94E-10	0,00E+00	6,93E-10	8,79E-10	1,30E-10	-3,29E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	5,64E-01	1,54E-03	2,24E-04	0,00E+00	4,11E-04	4,88E-04	2,67E-05	2,03E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	2,13E+02	1,53E-01	5,04E-02	0,00E+00	4,17E-02	6,19E-02	2,81E-03	-4,09E+00
Human toxicity, cancer <sup>2</sup>	CTUh	1,57E-08	2,38E-12	8,05E-12	0,00E+00	5,81E-13	1,04E-12	3,73E-14	5,13E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	3,47E-07	2,87E-10	6,49E-11	0,00E+00	8,13E-11	4,78E-11	4,34E-12	-5,09E-09
Land use <sup>2</sup>	Pt	6,70E+01	9,58E-04	1,55E-02	0,00E+00	2,58E-04	6,68E-03	7,75E-03	-1,30E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 0,7 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	3,23E+01	5,38E-04	4,30E-03	0,00E+00	1,45E-04	9,42E-03	1,80E-05	-5,27E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,52E+01	5,38E-04	4,30E-03	0,00E+00	1,45E-04	9,42E-03	1,80E-05	-5,27E+00
PENRE	MJ	1,31E+02	3,55E-01	6,56E-02	0,00E+00	9,46E-02	1,84E-01	6,33E-03	-1,34E+01
PENRM	MJ	2,05E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,52E+02	3,55E-01	6,56E-02	0,00E+00	9,46E-02	1,84E-01	6,33E-03	-1,34E+01
Use of secondary material	kg	1,51E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	2,08E-01	1,05E-06	2,97E-05	0,00E+00	2,94E-07	6,47E-05	1,28E-07	-5,74E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 0,7 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1,77E-02	8,71E-07	1,63E-07	0,00E+00	2,49E-07	2,26E-07	1,60E-08	-5,26E-05
Non-hazardous waste disposed	kg	1,18E+00	1,53E-05	7,03E-02	0,00E+00	4,26E-06	7,29E-05	1,89E-01	1,71E-01
Radioactive waste disposed	kg	5,59E-04	2,54E-06	3,15E-07	0,00E+00	6,76E-07	6,60E-07	4,39E-08	1,57E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 0,7 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	1,70E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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

## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 0,8 mm – 2,16 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,8 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	9,50E+00	2,88E-02	1,22E-02	0,00E+00	7,68E-03	1,42E-02	5,39E-04	-1,95E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	9,86E+00	2,88E-02	6,04E-03	0,00E+00	7,68E-03	1,40E-02	5,37E-04	-5,48E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,46E-01	9,03E-06	6,20E-03	0,00E+00	2,46E-06	2,73E-01	2,41E-06	3,54E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	8,27E-02	2,55E-07	4,38E-06	0,00E+00	6,30E-08	6,22E-07	1,37E-08	-1,53E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	9,75E+00	2,86E-02	9,72E-03	0,00E+00	7,64E-03	1,38E-02	5,28E-04	-5,19E-01
Ozone depletion	kgCFC11eq	1,46E-06	6,71E-09	7,75E-10	0,00E+00	1,81E-09	2,12E-09	1,13E-10	-2,92E-08
Acidification	mol H+eq	6,21E-02	2,11E-04	2,45E-05	0,00E+00	3,46E-05	7,72E-05	5,59E-06	-1,83E-03
Eutrophication, freshwater	kg P eq	4,13E-04	1,51E-08	1,08E-07	0,00E+00	4,14E-09	2,92E-07	1,64E-09	-1,41E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,27E-03	4,63E-08	3,33E-07	0,00E+00	1,27E-08	8,96E-07	5,03E-09	-4,32E-05
Eutrophication, marine	kg N eq	7,58E-03	6,63E-05	9,53E-06	0,00E+00	1,27E-05	2,12E-05	2,44E-06	-6,61E-04
Eutrophication, terrestrial	mol N eq	7,91E-02	7,31E-04	8,23E-05	0,00E+00	1,40E-04	2,35E-04	2,67E-05	-4,65E-03
Photochemical ozone formation	kg NMVOCeq	2,78E-02	1,89E-04	2,55E-05	0,00E+00	3,63E-05	6,56E-05	7,42E-06	-3,36E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	3,42E-04	1,16E-09	9,93E-09	0,00E+00	3,36E-10	2,89E-10	2,61E-11	2,84E-07
Resource use, fossils <sup>2</sup>	MJ	1,55E+02	4,02E-01	6,56E-02	0,00E+00	1,08E-01	2,10E-01	7,21E-03	-1,37E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	3,34E+00	-6,64E-05	1,02E-03	0,00E+00	-1,71E-05	2,76E-03	2,69E-06	-9,99E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,8 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	4,64E-07	2,76E-09	3,94E-10	0,00E+00	7,92E-10	1,01E-09	1,49E-10	-3,50E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	6,11E-01	1,75E-03	2,24E-04	0,00E+00	4,69E-04	5,58E-04	3,05E-05	2,19E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	2,32E+02	1,73E-01	5,04E-02	0,00E+00	4,76E-02	7,08E-02	3,21E-03	-5,38E+00
Human toxicity, cancer <sup>2</sup>	CTUh	1,72E-08	2,69E-12	8,05E-12	0,00E+00	6,63E-13	1,19E-12	4,25E-14	5,82E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	3,86E-07	3,24E-10	6,49E-11	0,00E+00	9,29E-11	5,46E-11	4,95E-12	-5,82E-09
Land use <sup>2</sup>	Pt	6,74E+01	1,08E-03	1,55E-02	0,00E+00	2,95E-04	7,64E-03	8,83E-03	-1,30E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,8 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	3,46E+01	6,08E-04	4,30E-03	0,00E+00	1,65E-04	1,08E-02	2,06E-05	-5,24E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,75E+01	6,08E-04	4,30E-03	0,00E+00	1,65E-04	1,08E-02	2,06E-05	-5,24E+00
PENRE	MJ	1,36E+02	4,02E-01	6,56E-02	0,00E+00	1,08E-01	2,10E-01	7,21E-03	-1,37E+01
PENRM	MJ	1,97E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,55E+02	4,02E-01	6,56E-02	0,00E+00	1,08E-01	2,10E-01	7,21E-03	-1,37E+01
Use of secondary material	kg	1,73E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	2,26E-01	1,19E-06	2,97E-05	0,00E+00	3,36E-07	7,40E-05	1,46E-07	-2,99E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,8 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,01E-02	9,85E-07	1,63E-07	0,00E+00	2,84E-07	2,58E-07	1,83E-08	-5,94E-05
Non-hazardous waste disposed	kg	1,29E+00	1,73E-05	7,03E-02	0,00E+00	4,86E-06	8,33E-05	2,15E-01	1,95E-01
Radioactive waste disposed	kg	5,99E-04	2,88E-06	3,15E-07	0,00E+00	7,73E-07	7,55E-07	5,01E-08	1,70E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 0,8 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	1,94E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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**PENRT** = Total use of non-renewable primary energy re-sources



## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 0,8 mm – 2,16 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 0,8 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	9,80E+00	2,88E-02	1,22E-02	0,00E+00	7,68E-03	1,42E-02	5,39E-04	-1,95E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	1,02E+01	2,88E-02	6,04E-03	0,00E+00	7,68E-03	1,40E-02	5,37E-04	-5,48E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,45E-01	9,03E-06	6,20E-03	0,00E+00	2,46E-06	2,73E-01	2,41E-06	3,54E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	8,75E-02	2,55E-07	4,38E-06	0,00E+00	6,30E-08	6,22E-07	1,37E-08	-1,53E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	1,00E+01	2,86E-02	9,72E-03	0,00E+00	7,64E-03	1,38E-02	5,28E-04	-5,19E-01
Ozone depletion	kgCFC11eq	1,50E-06	6,71E-09	7,75E-10	0,00E+00	1,81E-09	2,12E-09	1,13E-10	-2,92E-08
Acidification	mol H+eq	6,33E-02	2,11E-04	2,45E-05	0,00E+00	3,46E-05	7,72E-05	5,59E-06	-1,83E-03
Eutrophication, freshwater	kg P eq	4,22E-04	1,51E-08	1,08E-07	0,00E+00	4,14E-09	2,92E-07	1,64E-09	-1,41E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,29E-03	4,63E-08	3,33E-07	0,00E+00	1,27E-08	8,96E-07	5,03E-09	-4,32E-05
Eutrophication, marine	kg N eq	7,79E-03	6,63E-05	9,53E-06	0,00E+00	1,27E-05	2,12E-05	2,44E-06	-6,61E-04
Eutrophication, terrestrial	mol N eq	8,14E-02	7,31E-04	8,23E-05	0,00E+00	1,40E-04	2,35E-04	2,67E-05	-4,65E-03
Photochemical ozone formation	kg NMVOCeq	2,85E-02	1,89E-04	2,55E-05	0,00E+00	3,63E-05	6,56E-05	7,42E-06	-3,36E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	3,42E-04	1,16E-09	9,93E-09	0,00E+00	3,36E-10	2,89E-10	2,61E-11	2,84E-07
Resource use, fossils <sup>2</sup>	MJ	1,61E+02	4,02E-01	6,56E-02	0,00E+00	1,08E-01	2,10E-01	7,21E-03	-1,37E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	3,46E+00	-6,64E-05	1,02E-03	0,00E+00	-1,71E-05	2,76E-03	2,69E-06	-9,99E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 0,8 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	4,70E-07	2,76E-09	3,94E-10	0,00E+00	7,92E-10	1,01E-09	1,49E-10	-3,50E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	6,21E-01	1,75E-03	2,24E-04	0,00E+00	4,69E-04	5,58E-04	3,05E-05	2,19E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	2,34E+02	1,73E-01	5,04E-02	0,00E+00	4,76E-02	7,08E-02	3,21E-03	-5,38E+00
Human toxicity, cancer <sup>2</sup>	CTUh	1,73E-08	2,69E-12	8,05E-12	0,00E+00	6,63E-13	1,19E-12	4,25E-14	5,82E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	3,87E-07	3,24E-10	6,49E-11	0,00E+00	9,29E-11	5,46E-11	4,95E-12	-5,82E-09
Land use <sup>2</sup>	Pt	6,79E+01	1,08E-03	1,55E-02	0,00E+00	2,95E-04	7,64E-03	8,83E-03	-1,30E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 0,8 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	3,51E+01	6,08E-04	4,30E-03	0,00E+00	1,65E-04	1,08E-02	2,06E-05	-5,24E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	3,80E+01	6,08E-04	4,30E-03	0,00E+00	1,65E-04	1,08E-02	2,06E-05	-5,24E+00
PENRE	MJ	1,41E+02	4,02E-01	6,56E-02	0,00E+00	1,08E-01	2,10E-01	7,21E-03	-1,37E+01
PENRM	MJ	2,05E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,61E+02	4,02E-01	6,56E-02	0,00E+00	1,08E-01	2,10E-01	7,21E-03	-1,37E+01
Use of secondary material	kg	1,73E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	2,29E-01	1,19E-06	2,97E-05	0,00E+00	3,36E-07	7,40E-05	1,46E-07	-2,99E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 0,8 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,01E-02	9,85E-07	1,63E-07	0,00E+00	2,84E-07	2,58E-07	1,83E-08	-5,94E-05
Non-hazardous waste disposed	kg	1,30E+00	1,73E-05	7,03E-02	0,00E+00	4,86E-06	8,33E-05	2,15E-01	1,95E-01
Radioactive waste disposed	kg	6,11E-04	2,88E-06	3,15E-07	0,00E+00	7,73E-07	7,55E-07	5,01E-08	1,70E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 0,8 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	1,94E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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

## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 1,0 mm – 2,70 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	1,08E+01	3,53E-02	1,22E-02	0,00E+00	9,60E-03	1,78E-02	6,74E-04	-2,76E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	1,11E+01	3,53E-02	6,04E-03	0,00E+00	9,60E-03	1,75E-02	6,71E-04	-6,30E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,26E-01	1,11E-05	6,20E-03	0,00E+00	3,07E-06	2,73E-01	3,02E-06	3,55E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	1,01E-01	3,13E-07	4,38E-06	0,00E+00	7,88E-08	7,79E-07	1,71E-08	-1,51E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	1,10E+01	3,51E-02	9,72E-03	0,00E+00	9,55E-03	1,72E-02	6,60E-04	-5,96E-01
Ozone depletion	kgCFC11eq	1,58E-06	8,23E-09	7,75E-10	0,00E+00	2,26E-09	2,66E-09	1,41E-10	-3,06E-08
Acidification	mol H+eq	7,22E-02	2,59E-04	2,45E-05	0,00E+00	4,32E-05	9,66E-05	6,99E-06	-2,08E-03
Eutrophication, freshwater	kg P eq	4,88E-04	1,85E-08	1,08E-07	0,00E+00	5,18E-09	3,65E-07	2,05E-09	-1,81E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,50E-03	5,68E-08	3,33E-07	0,00E+00	1,59E-08	1,12E-06	6,29E-09	-5,55E-05
Eutrophication, marine	kg N eq	8,58E-03	8,13E-05	9,53E-06	0,00E+00	1,59E-05	2,66E-05	3,04E-06	-7,16E-04
Eutrophication, terrestrial	mol N eq	9,08E-02	8,96E-04	8,23E-05	0,00E+00	1,75E-04	2,94E-04	3,34E-05	-5,30E-03
Photochemical ozone formation	kg NMVOCeq	3,19E-02	2,31E-04	2,55E-05	0,00E+00	4,54E-05	8,20E-05	9,27E-06	-3,86E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	4,22E-04	1,42E-09	9,93E-09	0,00E+00	4,20E-10	3,62E-10	3,27E-11	2,82E-07
Resource use, fossils <sup>2</sup>	MJ	1,75E+02	4,93E-01	6,56E-02	0,00E+00	1,35E-01	2,63E-01	9,02E-03	-1,43E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	3,70E+00	-8,15E-05	1,02E-03	0,00E+00	-2,13E-05	3,45E-03	3,37E-06	-8,48E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	5,43E-07	3,38E-09	3,94E-10	0,00E+00	9,90E-10	1,26E-09	1,86E-10	-3,92E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	7,25E-01	2,14E-03	2,24E-04	0,00E+00	5,87E-04	6,98E-04	3,81E-05	2,50E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	2,75E+02	2,12E-01	5,04E-02	0,00E+00	5,95E-02	8,86E-02	4,01E-03	-7,97E+00
Human toxicity, cancer <sup>2</sup>	CTUh	2,05E-08	3,30E-12	8,05E-12	0,00E+00	8,29E-13	1,49E-12	5,31E-14	7,20E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	4,67E-07	3,98E-10	6,49E-11	0,00E+00	1,16E-10	6,84E-11	6,18E-12	-7,38E-09
Land use <sup>2</sup>	Pt	6,93E+01	1,33E-03	1,55E-02	0,00E+00	3,69E-04	9,57E-03	1,10E-02	-1,31E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	4,03E+01	7,47E-04	4,30E-03	0,00E+00	2,07E-04	1,35E-02	2,57E-05	-5,18E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	4,32E+01	7,47E-04	4,30E-03	0,00E+00	2,07E-04	1,35E-02	2,57E-05	-5,18E+00
PENRE	MJ	1,55E+02	4,93E-01	6,56E-02	0,00E+00	1,35E-01	2,63E-01	9,02E-03	-1,43E+01
PENRM	MJ	1,97E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,75E+02	4,93E-01	6,56E-02	0,00E+00	1,35E-01	2,63E-01	9,02E-03	-1,43E+01
Use of secondary material	kg	2,16E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	2,69E-01	1,46E-06	2,97E-05	0,00E+00	4,21E-07	9,26E-05	1,83E-07	2,24E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,48E-02	1,21E-06	1,63E-07	0,00E+00	3,55E-07	3,23E-07	2,29E-08	-7,27E-05
Non-hazardous waste disposed	kg	1,53E+00	2,12E-05	7,03E-02	0,00E+00	6,09E-06	1,04E-04	2,69E-01	2,44E-01
Radioactive waste disposed	kg	7,04E-04	3,53E-06	3,15E-07	0,00E+00	9,66E-07	9,44E-07	6,26E-08	1,97E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	2,43E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

**ACRONYMS**

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**PERM** = Use of renewable primary energy resources used as raw materials

**PERT** = Total use of renewable primary energy resources

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**PENRM** = Use of non-renewable primary energy resources used as raw materials

**PENRT** = Total use of non-renewable primary energy re-sources

## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 1,0 mm – 2,70 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 1,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	1,11E+01	3,53E-02	1,22E-02	0,00E+00	9,60E-03	1,78E-02	6,74E-04	-2,76E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	1,14E+01	3,53E-02	6,04E-03	0,00E+00	9,60E-03	1,75E-02	6,71E-04	-6,30E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,26E-01	1,11E-05	6,20E-03	0,00E+00	3,07E-06	2,73E-01	3,02E-06	3,55E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	1,06E-01	3,13E-07	4,38E-06	0,00E+00	7,88E-08	7,79E-07	1,71E-08	-1,51E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	1,13E+01	3,51E-02	9,72E-03	0,00E+00	9,55E-03	1,72E-02	6,60E-04	-5,96E-01
Ozone depletion	kgCFC11eq	1,62E-06	8,23E-09	7,75E-10	0,00E+00	2,26E-09	2,66E-09	1,41E-10	-3,06E-08
Acidification	mol H+eq	7,34E-02	2,59E-04	2,45E-05	0,00E+00	4,32E-05	9,66E-05	6,99E-06	-2,08E-03
Eutrophication, freshwater	kg P eq	4,96E-04	1,85E-08	1,08E-07	0,00E+00	5,18E-09	3,65E-07	2,05E-09	-1,81E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,52E-03	5,68E-08	3,33E-07	0,00E+00	1,59E-08	1,12E-06	6,29E-09	-5,55E-05
Eutrophication, marine	kg N eq	8,80E-03	8,13E-05	9,53E-06	0,00E+00	1,59E-05	2,66E-05	3,04E-06	-7,16E-04
Eutrophication, terrestrial	mol N eq	9,31E-02	8,96E-04	8,23E-05	0,00E+00	1,75E-04	2,94E-04	3,34E-05	-5,30E-03
Photochemical ozone formation	kg NMVOCeq	3,27E-02	2,31E-04	2,55E-05	0,00E+00	4,54E-05	8,20E-05	9,27E-06	-3,86E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	4,23E-04	1,42E-09	9,93E-09	0,00E+00	4,20E-10	3,62E-10	3,27E-11	2,82E-07
Resource use, fossils <sup>2</sup>	MJ	1,80E+02	4,93E-01	6,56E-02	0,00E+00	1,35E-01	2,63E-01	9,02E-03	-1,43E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	3,82E+00	-8,15E-05	1,02E-03	0,00E+00	-2,13E-05	3,45E-03	3,37E-06	-8,48E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 1,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	5,49E-07	3,38E-09	3,94E-10	0,00E+00	9,90E-10	1,26E-09	1,86E-10	-3,92E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	7,35E-01	2,14E-03	2,24E-04	0,00E+00	5,87E-04	6,98E-04	3,81E-05	2,50E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	2,77E+02	2,12E-01	5,04E-02	0,00E+00	5,95E-02	8,86E-02	4,01E-03	-7,97E+00
Human toxicity, cancer <sup>2</sup>	CTUh	2,05E-08	3,30E-12	8,05E-12	0,00E+00	8,29E-13	1,49E-12	5,31E-14	7,20E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	4,68E-07	3,98E-10	6,49E-11	0,00E+00	1,16E-10	6,84E-11	6,18E-12	-7,38E-09
Land use <sup>2</sup>	Pt	6,99E+01	1,33E-03	1,55E-02	0,00E+00	3,69E-04	9,57E-03	1,10E-02	-1,31E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 1,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	4,08E+01	7,47E-04	4,30E-03	0,00E+00	2,07E-04	1,35E-02	2,57E-05	-5,18E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	4,37E+01	7,47E-04	4,30E-03	0,00E+00	2,07E-04	1,35E-02	2,57E-05	-5,18E+00
PENRE	MJ	1,60E+02	4,93E-01	6,56E-02	0,00E+00	1,35E-01	2,63E-01	9,02E-03	-1,43E+01
PENRM	MJ	2,05E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,80E+02	4,93E-01	6,56E-02	0,00E+00	1,35E-01	2,63E-01	9,02E-03	-1,43E+01
Use of secondary material	kg	2,16E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	2,72E-01	1,46E-06	2,97E-05	0,00E+00	4,21E-07	9,26E-05	1,83E-07	2,24E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 1,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,48E-02	1,21E-06	1,63E-07	0,00E+00	3,55E-07	3,23E-07	2,29E-08	-7,27E-05
Non-hazardous waste disposed	kg	1,53E+00	2,12E-05	7,03E-02	0,00E+00	6,09E-06	1,04E-04	2,69E-01	2,44E-01
Radioactive waste disposed	kg	7,16E-04	3,53E-06	3,15E-07	0,00E+00	9,66E-07	9,44E-07	6,26E-08	1,97E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 1,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	2,43E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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

## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 1,2 mm – 3,24 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,2 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	1,21E+01	4,19E-02	1,22E-02	0,00E+00	1,15E-02	2,13E-02	8,11E-04	-3,58E-01
Climate change - Fossil	kgCO <sub>2</sub> eq	1,24E+01	4,19E-02	6,04E-03	0,00E+00	1,15E-02	2,10E-02	8,07E-04	-7,12E-01
Climate change - Biogenic	kgCO <sub>2</sub> eq	-4,07E-01	1,31E-05	6,20E-03	0,00E+00	3,69E-06	2,73E-01	3,63E-06	3,56E-01
Climate change - LULUC	kgCO <sub>2</sub> eq	1,20E-01	3,71E-07	4,38E-06	0,00E+00	9,45E-08	9,35E-07	2,06E-08	-1,48E-03
Climate change - GWP-GHG	kgCO <sub>2</sub> eq	1,22E+01	4,16E-02	9,72E-03	0,00E+00	1,15E-02	2,07E-02	7,95E-04	-6,73E-01
Ozone depletion	kgCFC11eq	1,70E-06	9,76E-09	7,75E-10	0,00E+00	2,71E-09	3,19E-09	1,70E-10	-3,20E-08
Acidification	mol H+eq	8,23E-02	3,07E-04	2,45E-05	0,00E+00	5,19E-05	1,16E-04	8,41E-06	-2,33E-03
Eutrophication, freshwater	kg P eq	5,63E-04	2,19E-08	1,08E-07	0,00E+00	6,20E-09	4,39E-07	2,46E-09	-2,21E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,73E-03	6,73E-08	3,33E-07	0,00E+00	1,90E-08	1,35E-06	7,57E-09	-6,78E-05
Eutrophication, marine	kg N eq	9,59E-03	9,64E-05	9,53E-06	0,00E+00	1,91E-05	3,19E-05	3,66E-06	-7,70E-04
Eutrophication, terrestrial	mol N eq	1,03E-01	1,06E-03	8,23E-05	0,00E+00	2,10E-04	3,54E-04	4,02E-05	-5,96E-03
Photochemical ozone formation	kg NMVOCeq	3,61E-02	2,74E-04	2,55E-05	0,00E+00	5,45E-05	9,85E-05	1,12E-05	-4,36E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	5,03E-04	1,69E-09	9,93E-09	0,00E+00	5,04E-10	4,35E-10	3,93E-11	2,80E-07
Resource use, fossils <sup>2</sup>	MJ	1,94E+02	5,85E-01	6,56E-02	0,00E+00	1,62E-01	3,16E-01	1,08E-02	-1,50E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	4,07E+00	-9,66E-05	1,02E-03	0,00E+00	-2,56E-05	4,14E-03	4,05E-06	-6,94E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,2 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	6,23E-07	4,01E-09	3,94E-10	0,00E+00	1,19E-09	1,51E-09	2,23E-10	-4,34E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	8,39E-01	2,54E-03	2,24E-04	0,00E+00	7,04E-04	8,38E-04	4,58E-05	2,80E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	3,18E+02	2,51E-01	5,04E-02	0,00E+00	7,15E-02	1,06E-01	4,82E-03	-1,06E+01
Human toxicity, cancer <sup>2</sup>	CTUh	2,37E-08	3,91E-12	8,05E-12	0,00E+00	9,95E-13	1,79E-12	6,39E-14	8,58E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	5,47E-07	4,72E-10	6,49E-11	0,00E+00	1,39E-10	8,21E-11	7,44E-12	-8,92E-09
Land use <sup>2</sup>	Pt	7,13E+01	1,58E-03	1,55E-02	0,00E+00	4,43E-04	1,15E-02	1,33E-02	-1,31E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,2 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	4,60E+01	8,85E-04	4,30E-03	0,00E+00	2,48E-04	1,62E-02	3,09E-05	-5,12E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	4,89E+01	8,85E-04	4,30E-03	0,00E+00	2,48E-04	1,62E-02	3,09E-05	-5,12E+00
PENRE	MJ	1,74E+02	5,85E-01	6,56E-02	0,00E+00	1,62E-01	3,16E-01	1,08E-02	-1,50E+01
PENRM	MJ	1,98E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,94E+02	5,85E-01	6,56E-02	0,00E+00	1,62E-01	3,16E-01	1,08E-02	-1,50E+01
Use of secondary material	kg	2,59E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	3,12E-01	1,73E-06	2,97E-05	0,00E+00	5,04E-07	1,11E-04	2,20E-07	7,53E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,2 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,96E-02	1,43E-06	1,63E-07	0,00E+00	4,26E-07	3,88E-07	2,75E-08	-8,61E-05
Non-hazardous waste disposed	kg	1,76E+00	2,52E-05	7,03E-02	0,00E+00	7,29E-06	1,25E-04	3,24E-01	2,92E-01
Radioactive waste disposed	kg	8,09E-04	4,18E-06	3,15E-07	0,00E+00	1,16E-06	1,13E-06	7,53E-08	2,24E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,2 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	2,92E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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



## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 1,2 mm – 3,24 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 1,2 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	1,24E+01	4,19E-02	1,22E-02	0,00E+00	1,15E-02	2,13E-02	8,11E-04	-3,58E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	1,27E+01	4,19E-02	6,04E-03	0,00E+00	1,15E-02	2,10E-02	8,07E-04	-7,12E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-4,07E-01	1,31E-05	6,20E-03	0,00E+00	3,69E-06	2,73E-01	3,63E-06	3,56E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	1,25E-01	3,71E-07	4,38E-06	0,00E+00	9,45E-08	9,35E-07	2,06E-08	-1,48E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	1,25E+01	4,16E-02	9,72E-03	0,00E+00	1,15E-02	2,07E-02	7,95E-04	-6,73E-01
Ozone depletion	kgCFC11eq	1,74E-06	9,76E-09	7,75E-10	0,00E+00	2,71E-09	3,19E-09	1,70E-10	-3,20E-08
Acidification	mol H+eq	8,36E-02	3,07E-04	2,45E-05	0,00E+00	5,19E-05	1,16E-04	8,41E-06	-2,33E-03
Eutrophication, freshwater	kg P eq	5,71E-04	2,19E-08	1,08E-07	0,00E+00	6,20E-09	4,39E-07	2,46E-09	-2,21E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	1,75E-03	6,73E-08	3,33E-07	0,00E+00	1,90E-08	1,35E-06	7,57E-09	-6,78E-05
Eutrophication, marine	kg N eq	9,81E-03	9,64E-05	9,53E-06	0,00E+00	1,91E-05	3,19E-05	3,66E-06	-7,70E-04
Eutrophication, terrestrial	mol N eq	1,05E-01	1,06E-03	8,23E-05	0,00E+00	2,10E-04	3,54E-04	4,02E-05	-5,96E-03
Photochemical ozone formation	kg NMVOCeq	3,69E-02	2,74E-04	2,55E-05	0,00E+00	5,45E-05	9,85E-05	1,12E-05	-4,36E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	5,03E-04	1,69E-09	9,93E-09	0,00E+00	5,04E-10	4,35E-10	3,93E-11	2,80E-07
Resource use, fossils <sup>2</sup>	MJ	1,99E+02	5,85E-01	6,56E-02	0,00E+00	1,62E-01	3,16E-01	1,08E-02	-1,50E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	4,18E+00	-9,66E-05	1,02E-03	0,00E+00	-2,56E-05	4,14E-03	4,05E-06	-6,94E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 1,2 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	6,28E-07	4,01E-09	3,94E-10	0,00E+00	1,19E-09	1,51E-09	2,23E-10	-4,34E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	8,50E-01	2,54E-03	2,24E-04	0,00E+00	7,04E-04	8,38E-04	4,58E-05	2,80E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	3,20E+02	2,51E-01	5,04E-02	0,00E+00	7,15E-02	1,06E-01	4,82E-03	-1,06E+01
Human toxicity, cancer <sup>2</sup>	CTUh	2,37E-08	3,91E-12	8,05E-12	0,00E+00	9,95E-13	1,79E-12	6,39E-14	8,58E-09
Human toxicity, non-cancer <sup>2</sup>	CTUh	5,49E-07	4,72E-10	6,49E-11	0,00E+00	1,39E-10	8,21E-11	7,44E-12	-8,92E-09
Land use <sup>2</sup>	Pt	7,19E+01	1,58E-03	1,55E-02	0,00E+00	4,43E-04	1,15E-02	1,33E-02	-1,31E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 1,2 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	4,65E+01	8,85E-04	4,30E-03	0,00E+00	2,48E-04	1,62E-02	3,09E-05	-5,12E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	4,94E+01	8,85E-04	4,30E-03	0,00E+00	2,48E-04	1,62E-02	3,09E-05	-5,12E+00
PENRE	MJ	1,79E+02	5,85E-01	6,56E-02	0,00E+00	1,62E-01	3,16E-01	1,08E-02	-1,50E+01
PENRM	MJ	2,06E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	1,99E+02	5,85E-01	6,56E-02	0,00E+00	1,62E-01	3,16E-01	1,08E-02	-1,50E+01
Use of secondary material	kg	2,59E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	3,15E-01	1,73E-06	2,97E-05	0,00E+00	5,04E-07	1,11E-04	2,20E-07	7,53E-04

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 1,2 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	2,96E-02	1,43E-06	1,63E-07	0,00E+00	4,26E-07	3,88E-07	2,75E-08	-8,61E-05
Non-hazardous waste disposed	kg	1,76E+00	2,52E-05	7,03E-02	0,00E+00	7,29E-06	1,25E-04	3,24E-01	2,92E-01
Radioactive waste disposed	kg	8,21E-04	4,18E-06	3,15E-07	0,00E+00	1,16E-06	1,13E-06	7,53E-08	2,24E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 1,2 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	2,92E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 1,5 mm – 4,05 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	1,40E+01	5,17E-02	1,22E-02	0,00E+00	1,44E-02	2,66E-02	1,01E-03	-4,81E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	1,42E+01	5,17E-02	6,04E-03	0,00E+00	1,44E-02	2,62E-02	1,01E-03	-8,36E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-3,78E-01	1,62E-05	6,20E-03	0,00E+00	4,61E-06	2,73E-01	4,53E-06	3,57E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	1,48E-01	4,59E-07	4,38E-06	0,00E+00	1,18E-07	1,17E-06	2,57E-08	-1,44E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	1,41E+01	5,15E-02	9,72E-03	0,00E+00	1,43E-02	2,58E-02	9,92E-04	-7,87E-01
Ozone depletion	kgCFC11eq	1,88E-06	1,21E-08	7,75E-10	0,00E+00	3,39E-09	3,98E-09	2,12E-10	-3,41E-08
Acidification	mol H+eq	9,75E-02	3,79E-04	2,45E-05	0,00E+00	6,49E-05	1,45E-04	1,05E-05	-2,71E-03
Eutrophication, freshwater	kg P eq	6,75E-04	2,71E-08	1,08E-07	0,00E+00	7,76E-09	5,47E-07	3,08E-09	-2,81E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	2,07E-03	8,32E-08	3,33E-07	0,00E+00	2,38E-08	1,68E-06	9,44E-09	-8,61E-05
Eutrophication, marine	kg N eq	1,11E-02	1,19E-04	9,53E-06	0,00E+00	2,39E-05	3,98E-05	4,57E-06	-8,52E-04
Eutrophication, terrestrial	mol N eq	1,20E-01	1,31E-03	8,23E-05	0,00E+00	2,62E-04	4,41E-04	5,02E-05	-6,94E-03
Photochemical ozone formation	kg NMVOCeq	4,24E-02	3,38E-04	2,55E-05	0,00E+00	6,81E-05	1,23E-04	1,39E-05	-5,11E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	6,25E-04	2,09E-09	9,93E-09	0,00E+00	6,31E-10	5,43E-10	4,90E-11	2,78E-07
Resource use, fossils <sup>2</sup>	MJ	2,22E+02	7,23E-01	6,56E-02	0,00E+00	2,03E-01	3,94E-01	1,35E-02	-1,59E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	4,61E+00	-1,19E-04	1,02E-03	0,00E+00	-3,20E-05	5,17E-03	5,06E-06	-4,63E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	7,41E-07	4,96E-09	3,94E-10	0,00E+00	1,48E-09	1,88E-09	2,79E-10	-4,97E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	1,01E+00	3,14E-03	2,24E-04	0,00E+00	8,80E-04	1,05E-03	5,72E-05	3,27E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	3,83E+02	3,10E-01	5,04E-02	0,00E+00	8,93E-02	1,33E-01	6,02E-03	-1,44E+01
Human toxicity, cancer <sup>2</sup>	CTUh	2,85E-08	4,84E-12	8,05E-12	0,00E+00	1,24E-12	2,23E-12	7,98E-14	1,06E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	6,69E-07	5,84E-10	6,49E-11	0,00E+00	1,74E-10	1,02E-10	9,28E-12	-1,12E-08
Land use <sup>2</sup>	Pt	7,42E+01	1,95E-03	1,55E-02	0,00E+00	5,54E-04	1,43E-02	1,66E-02	-1,32E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	5,45E+01	1,09E-03	4,30E-03	0,00E+00	3,10E-04	2,02E-02	3,86E-05	-5,03E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	5,74E+01	1,09E-03	4,30E-03	0,00E+00	3,10E-04	2,02E-02	3,86E-05	-5,03E+00
PENRE	MJ	2,03E+02	7,23E-01	6,56E-02	0,00E+00	2,03E-01	3,94E-01	1,35E-02	-1,59E+01
PENRM	MJ	1,98E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,22E+02	7,23E-01	6,56E-02	0,00E+00	2,03E-01	3,94E-01	1,35E-02	-1,59E+01
Use of secondary material	kg	3,24E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	3,76E-01	2,14E-06	2,97E-05	0,00E+00	6,30E-07	1,39E-04	2,75E-07	1,55E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3,67E-02	1,77E-06	1,63E-07	0,00E+00	5,33E-07	4,83E-07	3,43E-08	-1,06E-04
Non-hazardous waste disposed	kg	2,11E+00	3,11E-05	7,03E-02	0,00E+00	9,12E-06	1,56E-04	4,04E-01	3,65E-01
Radioactive waste disposed	kg	9,67E-04	5,17E-06	3,15E-07	0,00E+00	1,45E-06	1,41E-06	9,40E-08	2,64E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 1,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	3,65E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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

## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 1,5 mm – 4,05 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 1,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	1,43E+01	5,17E-02	1,22E-02	0,00E+00	1,44E-02	2,66E-02	1,01E-03	-4,81E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	1,45E+01	5,17E-02	6,04E-03	0,00E+00	1,44E-02	2,62E-02	1,01E-03	-8,36E-01
Climate change – Biogenic	kgCO <sub>2</sub> eq	-3,77E-01	1,62E-05	6,20E-03	0,00E+00	4,61E-06	2,73E-01	4,53E-06	3,57E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	1,53E-01	4,59E-07	4,38E-06	0,00E+00	1,18E-07	1,17E-06	2,57E-08	-1,44E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	1,44E+01	5,15E-02	9,72E-03	0,00E+00	1,43E-02	2,58E-02	9,92E-04	-7,87E-01
Ozone depletion	kgCFC11eq	1,92E-06	1,21E-08	7,75E-10	0,00E+00	3,39E-09	3,98E-09	2,12E-10	-3,41E-08
Acidification	mol H+eq	9,87E-02	3,79E-04	2,45E-05	0,00E+00	6,49E-05	1,45E-04	1,05E-05	-2,71E-03
Eutrophication, freshwater	kg P eq	6,83E-04	2,71E-08	1,08E-07	0,00E+00	7,76E-09	5,47E-07	3,08E-09	-2,81E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	2,10E-03	8,32E-08	3,33E-07	0,00E+00	2,38E-08	1,68E-06	9,44E-09	-8,61E-05
Eutrophication, marine	kg N eq	1,13E-02	1,19E-04	9,53E-06	0,00E+00	2,39E-05	3,98E-05	4,57E-06	-8,52E-04
Eutrophication, terrestrial	mol N eq	1,22E-01	1,31E-03	8,23E-05	0,00E+00	2,62E-04	4,41E-04	5,02E-05	-6,94E-03
Photochemical ozone formation	kg NMVOCeq	4,31E-02	3,38E-04	2,55E-05	0,00E+00	6,81E-05	1,23E-04	1,39E-05	-5,11E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	6,25E-04	2,09E-09	9,93E-09	0,00E+00	6,31E-10	5,43E-10	4,90E-11	2,78E-07
Resource use, fossils <sup>2</sup>	MJ	2,28E+02	7,23E-01	6,56E-02	0,00E+00	2,03E-01	3,94E-01	1,35E-02	-1,59E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	4,73E+00	-1,19E-04	1,02E-03	0,00E+00	-3,20E-05	5,17E-03	5,06E-06	-4,63E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 1,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	7,47E-07	4,96E-09	3,94E-10	0,00E+00	1,48E-09	1,88E-09	2,79E-10	-4,97E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	1,02E+00	3,14E-03	2,24E-04	0,00E+00	8,80E-04	1,05E-03	5,72E-05	3,27E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	3,85E+02	3,10E-01	5,04E-02	0,00E+00	8,93E-02	1,33E-01	6,02E-03	-1,44E+01
Human toxicity, cancer <sup>2</sup>	CTUh	2,85E-08	4,84E-12	8,05E-12	0,00E+00	1,24E-12	2,23E-12	7,98E-14	1,06E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	6,70E-07	5,84E-10	6,49E-11	0,00E+00	1,74E-10	1,02E-10	9,28E-12	-1,12E-08
Land use <sup>2</sup>	Pt	7,48E+01	1,95E-03	1,55E-02	0,00E+00	5,54E-04	1,43E-02	1,66E-02	-1,32E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 1,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	5,50E+01	1,09E-03	4,30E-03	0,00E+00	3,10E-04	2,02E-02	3,86E-05	-5,03E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	5,79E+01	1,09E-03	4,30E-03	0,00E+00	3,10E-04	2,02E-02	3,86E-05	-5,03E+00
PENRE	MJ	2,07E+02	7,23E-01	6,56E-02	0,00E+00	2,03E-01	3,94E-01	1,35E-02	-1,59E+01
PENRM	MJ	2,06E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,28E+02	7,23E-01	6,56E-02	0,00E+00	2,03E-01	3,94E-01	1,35E-02	-1,59E+01
Use of secondary material	kg	3,24E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	3,79E-01	2,14E-06	2,97E-05	0,00E+00	6,30E-07	1,39E-04	2,75E-07	1,55E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 1,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	3,67E-02	1,77E-06	1,63E-07	0,00E+00	5,33E-07	4,83E-07	3,43E-08	-1,06E-04
Non-hazardous waste disposed	kg	2,11E+00	3,11E-05	7,03E-02	0,00E+00	9,12E-06	1,56E-04	4,04E-01	3,65E-01
Radioactive waste disposed	kg	9,79E-04	5,17E-06	3,15E-07	0,00E+00	1,45E-06	1,41E-06	9,40E-08	2,64E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 1,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	3,65E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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**PENRT** = Total use of non-renewable primary energy re-sources

## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 2,0 mm – 5,40 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	1,72E+01	6,81E-02	1,22E-02	0,00E+00	1,92E-02	3,55E-02	1,35E-03	-6,83E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	1,74E+01	6,81E-02	6,04E-03	0,00E+00	1,92E-02	3,49E-02	1,34E-03	-1,04E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-3,29E-01	2,14E-05	6,20E-03	0,00E+00	6,15E-06	2,73E-01	6,05E-06	3,58E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	1,95E-01	6,03E-07	4,38E-06	0,00E+00	1,57E-07	1,56E-06	3,44E-08	-1,38E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	1,72E+01	6,77E-02	9,72E-03	0,00E+00	1,91E-02	3,44E-02	1,32E-03	-9,78E-01
Ozone depletion	kgCFC11eq	2,18E-06	1,59E-08	7,75E-10	0,00E+00	4,52E-09	5,32E-09	2,83E-10	-3,76E-08
Acidification	mol H+eq	1,23E-01	4,98E-04	2,45E-05	0,00E+00	8,65E-05	1,93E-04	1,40E-05	-3,33E-03
Eutrophication, freshwater	kg P eq	8,62E-04	3,57E-08	1,08E-07	0,00E+00	1,03E-08	7,31E-07	4,10E-09	-3,79E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	2,65E-03	1,09E-07	3,33E-07	0,00E+00	3,17E-08	2,24E-06	1,26E-08	-1,16E-04
Eutrophication, marine	kg N eq	1,36E-02	1,57E-04	9,53E-06	0,00E+00	3,18E-05	5,31E-05	6,10E-06	-9,87E-04
Eutrophication, terrestrial	mol N eq	1,49E-01	1,73E-03	8,23E-05	0,00E+00	3,49E-04	5,89E-04	6,69E-05	-8,56E-03
Photochemical ozone formation	kg NMVOCeq	5,28E-02	4,45E-04	2,55E-05	0,00E+00	9,08E-05	1,64E-04	1,86E-05	-6,35E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	8,27E-04	2,75E-09	9,93E-09	0,00E+00	8,41E-10	7,24E-10	6,54E-11	2,75E-07
Resource use, fossils <sup>2</sup>	MJ	2,70E+02	9,51E-01	6,56E-02	0,00E+00	2,70E-01	5,26E-01	1,81E-02	-1,75E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	5,52E+00	-1,57E-04	1,02E-03	0,00E+00	-4,27E-05	6,90E-03	6,75E-06	-8,21E-03

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	9,39E-07	6,53E-09	3,94E-10	0,00E+00	1,98E-09	2,52E-09	3,72E-10	-6,01E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	1,30E+00	4,13E-03	2,24E-04	0,00E+00	1,17E-03	1,40E-03	7,63E-05	4,04E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	4,91E+02	4,09E-01	5,04E-02	0,00E+00	1,19E-01	1,77E-01	8,03E-03	-2,09E+01
Human toxicity, cancer <sup>2</sup>	CTUh	3,65E-08	6,36E-12	8,05E-12	0,00E+00	1,66E-12	2,98E-12	1,06E-13	1,41E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	8,71E-07	7,68E-10	6,49E-11	0,00E+00	2,32E-10	1,37E-10	1,24E-11	-1,50E-08
Land use <sup>2</sup>	Pt	7,91E+01	2,56E-03	1,55E-02	0,00E+00	7,38E-04	1,91E-02	2,21E-02	-1,33E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	6,87E+01	1,44E-03	4,30E-03	0,00E+00	4,13E-04	2,70E-02	5,15E-05	-4,89E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	7,15E+01	1,44E-03	4,30E-03	0,00E+00	4,13E-04	2,70E-02	5,15E-05	-4,89E+00
PENRE	MJ	2,50E+02	9,51E-01	6,56E-02	0,00E+00	2,70E-01	5,26E-01	1,81E-02	-1,75E+01
PENRM	MJ	1,99E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,70E+02	9,51E-01	6,56E-02	0,00E+00	2,70E-01	5,26E-01	1,81E-02	-1,75E+01
Use of secondary material	kg	4,32E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	4,83E-01	2,82E-06	2,97E-05	0,00E+00	8,39E-07	1,85E-04	3,66E-07	2,87E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	4,86E-02	2,33E-06	1,63E-07	0,00E+00	7,10E-07	6,45E-07	4,58E-08	-1,39E-04
Non-hazardous waste disposed	kg	2,69E+00	4,09E-05	7,03E-02	0,00E+00	1,22E-05	2,09E-04	5,40E-01	4,86E-01
Radioactive waste disposed	kg	1,23E-03	6,80E-06	3,15E-07	0,00E+00	1,93E-06	1,89E-06	1,25E-07	3,30E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	4,86E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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**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



## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 2,0 mm – 5,40 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 2,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	1,75E+01	6,81E-02	1,22E-02	0,00E+00	1,92E-02	3,55E-02	1,35E-03	-6,83E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	1,77E+01	6,81E-02	6,04E-03	0,00E+00	1,92E-02	3,49E-02	1,34E-03	-1,04E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-3,29E-01	2,14E-05	6,20E-03	0,00E+00	6,15E-06	2,73E-01	6,05E-06	3,58E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	2,00E-01	6,03E-07	4,38E-06	0,00E+00	1,57E-07	1,56E-06	3,44E-08	-1,38E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	1,75E+01	6,77E-02	9,72E-03	0,00E+00	1,91E-02	3,44E-02	1,32E-03	-9,78E-01
Ozone depletion	kgCFC11eq	2,22E-06	1,59E-08	7,75E-10	0,00E+00	4,52E-09	5,32E-09	2,83E-10	-3,76E-08
Acidification	mol H+eq	1,24E-01	4,98E-04	2,45E-05	0,00E+00	8,65E-05	1,93E-04	1,40E-05	-3,33E-03
Eutrophication, freshwater	kg P eq	8,70E-04	3,57E-08	1,08E-07	0,00E+00	1,03E-08	7,31E-07	4,10E-09	-3,79E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	2,67E-03	1,09E-07	3,33E-07	0,00E+00	3,17E-08	2,24E-06	1,26E-08	-1,16E-04
Eutrophication, marine	kg N eq	1,38E-02	1,57E-04	9,53E-06	0,00E+00	3,18E-05	5,31E-05	6,10E-06	-9,87E-04
Eutrophication, terrestrial	mol N eq	1,52E-01	1,73E-03	8,23E-05	0,00E+00	3,49E-04	5,89E-04	6,69E-05	-8,56E-03
Photochemical ozone formation	kg NMVOCeq	5,36E-02	4,45E-04	2,55E-05	0,00E+00	9,08E-05	1,64E-04	1,86E-05	-6,35E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	8,27E-04	2,75E-09	9,93E-09	0,00E+00	8,41E-10	7,24E-10	6,54E-11	2,75E-07
Resource use, fossils <sup>2</sup>	MJ	2,76E+02	9,51E-01	6,56E-02	0,00E+00	2,70E-01	5,26E-01	1,81E-02	-1,75E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	5,63E+00	-1,57E-04	1,02E-03	0,00E+00	-4,27E-05	6,90E-03	6,75E-06	-8,21E-03

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 2,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	9,45E-07	6,53E-09	3,94E-10	0,00E+00	1,98E-09	2,52E-09	3,72E-10	-6,01E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	1,31E+00	4,13E-03	2,24E-04	0,00E+00	1,17E-03	1,40E-03	7,63E-05	4,04E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	4,92E+02	4,09E-01	5,04E-02	0,00E+00	1,19E-01	1,77E-01	8,03E-03	-2,09E+01
Human toxicity, cancer <sup>2</sup>	CTUh	3,65E-08	6,36E-12	8,05E-12	0,00E+00	1,66E-12	2,98E-12	1,06E-13	1,41E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	8,72E-07	7,68E-10	6,49E-11	0,00E+00	2,32E-10	1,37E-10	1,24E-11	-1,50E-08
Land use <sup>2</sup>	Pt	7,97E+01	2,56E-03	1,55E-02	0,00E+00	7,38E-04	1,91E-02	2,21E-02	-1,33E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 2,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	6,92E+01	1,44E-03	4,30E-03	0,00E+00	4,13E-04	2,70E-02	5,15E-05	-4,89E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	7,21E+01	1,44E-03	4,30E-03	0,00E+00	4,13E-04	2,70E-02	5,15E-05	-4,89E+00
PENRE	MJ	2,55E+02	9,51E-01	6,56E-02	0,00E+00	2,70E-01	5,26E-01	1,81E-02	-1,75E+01
PENRM	MJ	2,07E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	2,76E+02	9,51E-01	6,56E-02	0,00E+00	2,70E-01	5,26E-01	1,81E-02	-1,75E+01
Use of secondary material	kg	4,32E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	4,85E-01	2,82E-06	2,97E-05	0,00E+00	8,39E-07	1,85E-04	3,66E-07	2,87E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 2,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	4,86E-02	2,33E-06	1,63E-07	0,00E+00	7,10E-07	6,45E-07	4,58E-08	-1,39E-04
Non-hazardous waste disposed	kg	2,70E+00	4,09E-05	7,03E-02	0,00E+00	1,22E-05	2,09E-04	5,40E-01	4,86E-01
Radioactive waste disposed	kg	1,24E-03	6,80E-06	3,15E-07	0,00E+00	1,93E-06	1,89E-06	1,25E-07	3,30E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 2,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	4,86E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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

## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 2,5 mm – 6,75 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	2.05E+01	8,37E-02	1,22E-02	0,00E+00	2,40E-02	4,43E-02	1,69E-03	-8,87E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	2.05E+01	8,37E-02	6,04E-03	0,00E+00	2,40E-02	4,36E-02	1,68E-03	-1,25E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-2,81E-01	2,63E-05	6,20E-03	0,00E+00	7,68E-06	2,74E-01	7,56E-06	3,60E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	2,41E-01	7,42E-07	4,38E-06	0,00E+00	1,97E-07	1,94E-06	4,30E-08	-1,32E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	2,03E+01	8,33E-02	9,72E-03	0,00E+00	2,39E-02	4,30E-02	1,65E-03	-1,17E+00
Ozone depletion	kgCFC11eq	2,49E-06	1,95E-08	7,75E-10	0,00E+00	5,65E-09	6,64E-09	3,54E-10	-4,11E-08
Acidification	mol H+eq	1,48E-01	6,15E-04	2,45E-05	0,00E+00	1,08E-04	2,41E-04	1,75E-05	-3,96E-03
Eutrophication, freshwater	kg P eq	1,05E-03	4,37E-08	1,08E-07	0,00E+00	1,29E-08	9,13E-07	5,13E-09	-4,79E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	3,22E-03	1,34E-07	3,33E-07	0,00E+00	3,97E-08	2,80E-06	1,58E-08	-1,47E-04
Eutrophication, marine	kg N eq	1,62E-02	1,93E-04	9,53E-06	0,00E+00	3,98E-05	6,64E-05	7,63E-06	-1,12E-03
Eutrophication, terrestrial	mol N eq	1,79E-01	2,13E-03	8,23E-05	0,00E+00	4,37E-04	7,35E-04	8,37E-05	-1,02E-02
Photochemical ozone formation	kg NMVOCeq	6,33E-02	5,49E-04	2,55E-05	0,00E+00	1,13E-04	2,05E-04	2,32E-05	-7,61E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	1,03E-03	3,37E-09	9,93E-09	0,00E+00	1,05E-09	9,05E-10	8,18E-11	2,72E-07
Resource use, fossils <sup>2</sup>	MJ	3,18E+02	1,17E+00	6,56E-02	0,00E+00	3,38E-01	6,57E-01	2,26E-02	-1,92E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	6,43E+00	-1,94E-04	1,02E-03	0,00E+00	-5,33E-05	8,62E-03	8,44E-06	3,03E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	1,14E-06	8,02E-09	3,94E-10	0,00E+00	2,47E-09	3,14E-09	4,65E-10	-7,06E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	1,58E+00	5,08E-03	2,24E-04	0,00E+00	1,47E-03	1,74E-03	9,54E-05	4,81E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	5,98E+02	5,02E-01	5,04E-02	0,00E+00	1,49E-01	2,21E-01	1,00E-02	-2,73E+01
Human toxicity, cancer <sup>2</sup>	CTUh	4,45E-08	7,83E-12	8,05E-12	0,00E+00	2,07E-12	3,72E-12	1,33E-13	1,75E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	1,07E-06	9,44E-10	6,49E-11	0,00E+00	2,90E-10	1,71E-10	1,55E-11	-1,88E-08
Land use <sup>2</sup>	Pt	8,40E+01	3,15E-03	1,55E-02	0,00E+00	9,23E-04	2,39E-02	2,77E-02	-1,34E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	8,28E+01	1,77E-03	4,30E-03	0,00E+00	5,16E-04	3,37E-02	6,44E-05	-4,74E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	8,57E+01	1,77E-03	4,30E-03	0,00E+00	5,16E-04	3,37E-02	6,44E-05	-4,74E+00
PENRE	MJ	2,98E+02	1,17E+00	6,56E-02	0,00E+00	3,38E-01	6,57E-01	2,26E-02	-1,92E+01
PENRM	MJ	1,99E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	3,18E+02	1,17E+00	6,56E-02	0,00E+00	3,38E-01	6,57E-01	2,26E-02	-1,92E+01
Use of secondary material	kg	5,40E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	5,89E-01	3,45E-06	2,97E-05	0,00E+00	1,05E-06	2,31E-04	4,58E-07	4,20E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	6,05E-02	2,87E-06	1,63E-07	0,00E+00	8,88E-07	8,06E-07	5,73E-08	-1,73E-04
Non-hazardous waste disposed	kg	3,27E+00	5,01E-05	7,03E-02	0,00E+00	1,52E-05	2,61E-04	6,75E-01	6,08E-01
Radioactive waste disposed	kg	1,49E-03	8,37E-06	3,15E-07	0,00E+00	2,41E-06	2,36E-06	1,57E-07	3,96E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 2,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	6,08E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 2,5 mm – 6,75 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 2,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	2,08E+01	8,37E-02	1,22E-02	0,00E+00	2,40E-02	4,43E-02	1,69E-03	-8,87E-01
Climate change – Fossil	kgCO <sub>2</sub> eq	2,08E+01	8,37E-02	6,04E-03	0,00E+00	2,40E-02	4,36E-02	1,68E-03	-1,25E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-2,80E-01	2,63E-05	6,20E-03	0,00E+00	7,68E-06	2,74E-01	7,56E-06	3,60E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	2,46E-01	7,42E-07	4,38E-06	0,00E+00	1,97E-07	1,94E-06	4,30E-08	-1,32E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	2,06E+01	8,33E-02	9,72E-03	0,00E+00	2,39E-02	4,30E-02	1,65E-03	-1,17E+00
Ozone depletion	kgCFC11eq	2,52E-06	1,95E-08	7,75E-10	0,00E+00	5,65E-09	6,64E-09	3,54E-10	-4,11E-08
Acidification	mol H+eq	1,49E-01	6,15E-04	2,45E-05	0,00E+00	1,08E-04	2,41E-04	1,75E-05	-3,96E-03
Eutrophication, freshwater	kg P eq	1,06E-03	4,37E-08	1,08E-07	0,00E+00	1,29E-08	9,13E-07	5,13E-09	-4,79E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	3,24E-03	1,34E-07	3,33E-07	0,00E+00	3,97E-08	2,80E-06	1,58E-08	-1,47E-04
Eutrophication, marine	kg N eq	1,64E-02	1,93E-04	9,53E-06	0,00E+00	3,98E-05	6,64E-05	7,63E-06	-1,12E-03
Eutrophication, terrestrial	mol N eq	1,81E-01	2,13E-03	8,23E-05	0,00E+00	4,37E-04	7,35E-04	8,37E-05	-1,02E-02
Photochemical ozone formation	kg NMVOCeq	6,40E-02	5,49E-04	2,55E-05	0,00E+00	1,13E-04	2,05E-04	2,32E-05	-7,61E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	1,03E-03	3,37E-09	9,93E-09	0,00E+00	1,05E-09	9,05E-10	8,18E-11	2,72E-07
Resource use, fossils <sup>2</sup>	MJ	3,24E+02	1,17E+00	6,56E-02	0,00E+00	3,38E-01	6,57E-01	2,26E-02	-1,92E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	6,54E+00	-1,94E-04	1,02E-03	0,00E+00	-5,33E-05	8,62E-03	8,44E-06	3,03E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 2,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	1,14E-06	8,02E-09	3,94E-10	0,00E+00	2,47E-09	3,14E-09	4,65E-10	-7,06E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	1,59E+00	5,08E-03	2,24E-04	0,00E+00	1,47E-03	1,74E-03	9,54E-05	4,81E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	6,00E+02	5,02E-01	5,04E-02	0,00E+00	1,49E-01	2,21E-01	1,00E-02	-2,73E+01
Human toxicity, cancer <sup>2</sup>	CTUh	4,45E-08	7,83E-12	8,05E-12	0,00E+00	2,07E-12	3,72E-12	1,33E-13	1,75E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	1,07E-06	9,44E-10	6,49E-11	0,00E+00	2,90E-10	1,71E-10	1,55E-11	-1,88E-08
Land use <sup>2</sup>	Pt	8,46E+01	3,15E-03	1,55E-02	0,00E+00	9,23E-04	2,39E-02	2,77E-02	-1,34E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 2,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	8,34E+01	1,77E-03	4,30E-03	0,00E+00	5,16E-04	3,37E-02	6,44E-05	-4,74E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	8,62E+01	1,77E-03	4,30E-03	0,00E+00	5,16E-04	3,37E-02	6,44E-05	-4,74E+00
PENRE	MJ	3,03E+02	1,17E+00	6,56E-02	0,00E+00	3,38E-01	6,57E-01	2,26E-02	-1,92E+01
PENRM	MJ	2,07E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	3,24E+02	1,17E+00	6,56E-02	0,00E+00	3,38E-01	6,57E-01	2,26E-02	-1,92E+01
Use of secondary material	kg	5,40E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	5,92E-01	3,45E-06	2,97E-05	0,00E+00	1,05E-06	2,31E-04	4,58E-07	4,20E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 2,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	6,05E-02	2,87E-06	1,63E-07	0,00E+00	8,88E-07	8,06E-07	5,73E-08	-1,73E-04
Non-hazardous waste disposed	kg	3,28E+00	5,01E-05	7,03E-02	0,00E+00	1,52E-05	2,61E-04	6,75E-01	6,08E-01
Radioactive waste disposed	kg	1,50E-03	8,37E-06	3,15E-07	0,00E+00	2,41E-06	2,36E-06	1,57E-07	3,96E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 2,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	6,08E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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

## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 3,0 mm – 8,10 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	2,37E+01	1,00E-01	1,22E-02	0,00E+00	2,88E-02	5,33E-02	2,02E-03	-1,09E+00
Climate change - Fossil	kgCO <sub>2</sub> eq	2,36E+01	1,00E-01	6,04E-03	0,00E+00	2,88E-02	5,24E-02	2,01E-03	-1,45E+00
Climate change - Biogenic	kgCO <sub>2</sub> eq	-2,32E-01	3,14E-05	6,20E-03	0,00E+00	9,22E-06	2,74E-01	9,06E-06	3,61E-01
Climate change - LULUC	kgCO <sub>2</sub> eq	2,88E-01	8,88E-07	4,38E-06	0,00E+00	2,36E-07	2,34E-06	5,15E-08	-1,26E-03
Climate change - GWP-GHG	kgCO <sub>2</sub> eq	2,34E+01	9,97E-02	9,72E-03	0,00E+00	2,86E-02	5,16E-02	1,98E-03	-1,36E+00
Ozone depletion	kgCFC11eq	2,79E-06	2,34E-08	7,75E-10	0,00E+00	6,78E-09	7,97E-09	4,25E-10	-4,46E-08
Acidification	mol H+eq	1,73E-01	7,35E-04	2,45E-05	0,00E+00	1,30E-04	2,90E-04	2,10E-05	-4,59E-03
Eutrophication, freshwater	kg P eq	1,24E-03	5,25E-08	1,08E-07	0,00E+00	1,55E-08	1,10E-06	6,15E-09	-5,79E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	3,79E-03	1,61E-07	3,33E-07	0,00E+00	4,76E-08	3,36E-06	1,89E-08	-1,78E-04
Eutrophication, marine	kg N eq	1,87E-02	2,31E-04	9,53E-06	0,00E+00	4,77E-05	7,97E-05	9,14E-06	-1,26E-03
Eutrophication, terrestrial	mol N eq	2,08E-01	2,54E-03	8,23E-05	0,00E+00	5,24E-04	8,83E-04	1,00E-04	-1,18E-02
Photochemical ozone formation	kg NMVOCeq	7,37E-02	6,56E-04	2,55E-05	0,00E+00	1,36E-04	2,46E-04	2,78E-05	-8,86E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	1,23E-03	4,04E-09	9,93E-09	0,00E+00	1,26E-09	1,09E-09	9,81E-11	2,68E-07
Resource use, fossils <sup>2</sup>	MJ	3,66E+02	1,40E+00	6,56E-02	0,00E+00	4,05E-01	7,89E-01	2,71E-02	-2,08E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	7,33E+00	-2,31E-04	1,02E-03	0,00E+00	-6,40E-05	1,03E-02	1,01E-05	6,88E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	1,33E-06	9,60E-09	3,94E-10	0,00E+00	2,97E-09	3,78E-09	5,58E-10	-8,11E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	1,87E+00	6,08E-03	2,24E-04	0,00E+00	1,76E-03	2,10E-03	1,14E-04	5,58E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	7,06E+02	6,01E-01	5,04E-02	0,00E+00	1,79E-01	2,66E-01	1,20E-02	-3,38E+01
Human toxicity, cancer <sup>2</sup>	CTUh	5,25E-08	9,37E-12	8,05E-12	0,00E+00	2,49E-12	4,46E-12	1,60E-13	2,10E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	1,28E-06	1,13E-09	6,49E-11	0,00E+00	3,48E-10	2,05E-10	1,86E-11	-2,26E-08
Land use <sup>2</sup>	Pt	8,89E+01	3,77E-03	1,55E-02	0,00E+00	1,11E-03	2,87E-02	3,32E-02	-1,35E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	9,70E+01	2,12E-03	4,30E-03	0,00E+00	6,20E-04	4,05E-02	7,72E-05	-4,59E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	9,99E+01	2,12E-03	4,30E-03	0,00E+00	6,20E-04	4,05E-02	7,72E-05	-4,59E+00
PENRE	MJ	3,46E+02	1,40E+00	6,56E-02	0,00E+00	4,05E-01	7,89E-01	2,71E-02	-2,08E+01
PENRM	MJ	2,00E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	3,66E+02	1,40E+00	6,56E-02	0,00E+00	4,05E-01	7,89E-01	2,71E-02	-2,08E+01
Use of secondary material	kg	6,48E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	6,96E-01	4,15E-06	2,97E-05	0,00E+00	1,26E-06	2,78E-04	5,49E-07	5,52E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	7,24E-02	3,43E-06	1,63E-07	0,00E+00	1,07E-06	9,68E-07	6,86E-08	-2,07E-04
Non-hazardous waste disposed	kg	3,86E+00	6,02E-05	7,03E-02	0,00E+00	1,82E-05	3,13E-04	8,09E-01	7,29E-01
Radioactive waste disposed	kg	1,75E-03	1,00E-05	3,15E-07	0,00E+00	2,90E-06	2,83E-06	1,88E-07	4,63E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	7,29E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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**PENRT** = Total use of non-renewable primary energy re-sources



## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 3,0 mm – 8,10 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 3,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	2,40E+01	1,00E-01	1,22E-02	0,00E+00	2,88E-02	5,33E-02	2,02E-03	-1,09E+00
Climate change – Fossil	kgCO <sub>2</sub> eq	2,39E+01	1,00E-01	6,04E-03	0,00E+00	2,88E-02	5,24E-02	2,01E-03	-1,45E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-2,32E-01	3,14E-05	6,20E-03	0,00E+00	9,22E-06	2,74E-01	9,06E-06	3,61E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	2,93E-01	8,88E-07	4,38E-06	0,00E+00	2,36E-07	2,34E-06	5,15E-08	-1,26E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	2,37E+01	9,97E-02	9,72E-03	0,00E+00	2,86E-02	5,16E-02	1,98E-03	-1,36E+00
Ozone depletion	kgCFC11eq	2,83E-06	2,34E-08	7,75E-10	0,00E+00	6,78E-09	7,97E-09	4,25E-10	-4,46E-08
Acidification	mol H+eq	1,75E-01	7,35E-04	2,45E-05	0,00E+00	1,30E-04	2,90E-04	2,10E-05	-4,59E-03
Eutrophication, freshwater	kg P eq	1,24E-03	5,25E-08	1,08E-07	0,00E+00	1,55E-08	1,10E-06	6,15E-09	-5,79E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	3,82E-03	1,61E-07	3,33E-07	0,00E+00	4,76E-08	3,36E-06	1,89E-08	-1,78E-04
Eutrophication, marine	kg N eq	1,89E-02	2,31E-04	9,53E-06	0,00E+00	4,77E-05	7,97E-05	9,14E-06	-1,26E-03
Eutrophication, terrestrial	mol N eq	2,10E-01	2,54E-03	8,23E-05	0,00E+00	5,24E-04	8,83E-04	1,00E-04	-1,18E-02
Photochemical ozone formation	kg NMVOCeq	7,45E-02	6,56E-04	2,55E-05	0,00E+00	1,36E-04	2,46E-04	2,78E-05	-8,86E-03
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	1,23E-03	4,04E-09	9,93E-09	0,00E+00	1,26E-09	1,09E-09	9,81E-11	2,68E-07
Resource use, fossils <sup>2</sup>	MJ	3,71E+02	1,40E+00	6,56E-02	0,00E+00	4,05E-01	7,89E-01	2,71E-02	-2,08E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	7,45E+00	-2,31E-04	1,02E-03	0,00E+00	-6,40E-05	1,03E-02	1,01E-05	6,88E-02

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 3,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	1,34E-06	9,60E-09	3,94E-10	0,00E+00	2,97E-09	3,78E-09	5,58E-10	-8,11E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	1,88E+00	6,08E-03	2,24E-04	0,00E+00	1,76E-03	2,10E-03	1,14E-04	5,58E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	7,08E+02	6,01E-01	5,04E-02	0,00E+00	1,79E-01	2,66E-01	1,20E-02	-3,38E+01
Human toxicity, cancer <sup>2</sup>	CTUh	5,25E-08	9,37E-12	8,05E-12	0,00E+00	2,49E-12	4,46E-12	1,60E-13	2,10E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	1,28E-06	1,13E-09	6,49E-11	0,00E+00	3,48E-10	2,05E-10	1,86E-11	-2,26E-08
Land use <sup>2</sup>	Pt	8,95E+01	3,77E-03	1,55E-02	0,00E+00	1,11E-03	2,87E-02	3,32E-02	-1,35E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 3,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	9,75E+01	2,12E-03	4,30E-03	0,00E+00	6,20E-04	4,05E-02	7,72E-05	-4,59E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,00E+02	2,12E-03	4,30E-03	0,00E+00	6,20E-04	4,05E-02	7,72E-05	-4,59E+00
PENRE	MJ	3,51E+02	1,40E+00	6,56E-02	0,00E+00	4,05E-01	7,89E-01	2,71E-02	-2,08E+01
PENRM	MJ	2,08E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	3,71E+02	1,40E+00	6,56E-02	0,00E+00	4,05E-01	7,89E-01	2,71E-02	-2,08E+01
Use of secondary material	kg	6,48E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	6,99E-01	4,15E-06	2,97E-05	0,00E+00	1,26E-06	2,78E-04	5,49E-07	5,52E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 3,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	7,24E-02	3,43E-06	1,63E-07	0,00E+00	1,07E-06	9,68E-07	6,86E-08	-2,07E-04
Non-hazardous waste disposed	kg	3,86E+00	6,02E-05	7,03E-02	0,00E+00	1,82E-05	3,13E-04	8,09E-01	7,29E-01
Radioactive waste disposed	kg	1,77E-03	1,00E-05	3,15E-07	0,00E+00	2,90E-06	2,83E-06	1,88E-07	4,63E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 3,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	7,29E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

**ACRONYMS**

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**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

## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 3,5 mm – 9,45 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	2,69E+01	1,17E-01	1,22E-02	0,00E+00	3,36E-02	6,21E-02	2,36E-03	-1,29E+00
Climate change – Fossil	kgCO <sub>2</sub> eq	2,68E+01	1,17E-01	6,04E-03	0,00E+00	3,36E-02	6,11E-02	2,35E-03	-1,66E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-1,84E-01	3,66E-05	6,20E-03	0,00E+00	1,08E-05	2,74E-01	1,06E-05	3,63E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	3,35E-01	1,03E-06	4,38E-06	0,00E+00	2,76E-07	2,72E-06	6,01E-08	-1,20E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	2,65E+01	1,16E-01	9,72E-03	0,00E+00	3,34E-02	6,02E-02	2,31E-03	-1,55E+00
Ozone depletion	kgCFC11eq	3,09E-06	2,72E-08	7,75E-10	0,00E+00	7,92E-09	9,30E-09	4,96E-10	-4,81E-08
Acidification	mol H+eq	1,99E-01	8,55E-04	2,45E-05	0,00E+00	1,51E-04	3,38E-04	2,45E-05	-5,22E-03
Eutrophication, freshwater	kg P eq	1,42E-03	6,11E-08	1,08E-07	0,00E+00	1,81E-08	1,28E-06	7,18E-09	-6,79E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	4,37E-03	1,88E-07	3,33E-07	0,00E+00	5,56E-08	3,92E-06	2,20E-08	-2,08E-04
Eutrophication, marine	kg N eq	2,12E-02	2,68E-04	9,53E-06	0,00E+00	5,57E-05	9,30E-05	1,07E-05	-1,39E-03
Eutrophication, terrestrial	mol N eq	2,37E-01	2,96E-03	8,23E-05	0,00E+00	6,11E-04	1,03E-03	1,17E-04	-1,35E-02
Photochemical ozone formation	kg NMVOCeq	8,41E-02	7,63E-04	2,55E-05	0,00E+00	1,59E-04	2,87E-04	3,25E-05	-1,01E-02
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	1,43E-03	4,70E-09	9,93E-09	0,00E+00	1,47E-09	1,27E-09	1,14E-10	2,65E-07
Resource use, fossils <sup>2</sup>	MJ	4,13E+02	1,63E+00	6,56E-02	0,00E+00	4,73E-01	9,20E-01	3,16E-02	-2,24E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	8,24E+00	-2,69E-04	1,02E-03	0,00E+00	-7,46E-05	1,21E-02	1,18E-05	1,07E-01

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	1,53E-06	1,12E-08	3,94E-10	0,00E+00	3,46E-09	4,40E-09	6,51E-10	-9,16E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	2,15E+00	7,08E-03	2,24E-04	0,00E+00	2,05E-03	2,44E-03	1,33E-04	6,36E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	8,13E+02	7,00E-01	5,04E-02	0,00E+00	2,08E-01	3,10E-01	1,40E-02	-4,03E+01
Human toxicity, cancer <sup>2</sup>	CTUh	6,05E-08	1,09E-11	8,05E-12	0,00E+00	2,90E-12	5,20E-12	1,86E-13	2,44E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	1,48E-06	1,32E-09	6,49E-11	0,00E+00	4,06E-10	2,39E-10	2,17E-11	-2,65E-08
Land use <sup>2</sup>	Pt	9,38E+01	4,39E-03	1,55E-02	0,00E+00	1,29E-03	3,35E-02	3,87E-02	-1,36E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1,11E+02	2,47E-03	4,30E-03	0,00E+00	7,23E-04	4,72E-02	9,01E-05	-4,44E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,14E+02	2,47E-03	4,30E-03	0,00E+00	7,23E-04	4,72E-02	9,01E-05	-4,44E+00
PENRE	MJ	3,93E+02	1,63E+00	6,56E-02	0,00E+00	4,73E-01	9,20E-01	3,16E-02	-2,24E+01
PENRM	MJ	2,01E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	4,13E+02	1,63E+00	6,56E-02	0,00E+00	4,73E-01	9,20E-01	3,16E-02	-2,24E+01
Use of secondary material	kg	7,56E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	8,03E-01	4,83E-06	2,97E-05	0,00E+00	1,47E-06	3,24E-04	6,41E-07	6,86E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	8,43E-02	3,99E-06	1,63E-07	0,00E+00	1,24E-06	1,13E-06	8,01E-08	-2,40E-04
Non-hazardous waste disposed	kg	4,44E+00	7,01E-05	7,03E-02	0,00E+00	2,13E-05	3,65E-04	9,44E-01	8,51E-01
Radioactive waste disposed	kg	2,02E-03	1,17E-05	3,15E-07	0,00E+00	3,38E-06	3,30E-06	2,19E-07	5,29E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 3,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	8,51E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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

## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 3,5 mm – 9,45 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 3,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	2,72E+01	1,17E-01	1,22E-02	0,00E+00	3,36E-02	6,21E-02	2,36E-03	-1,29E+00
Climate change – Fossil	kgCO <sub>2</sub> eq	2,70E+01	1,17E-01	6,04E-03	0,00E+00	3,36E-02	6,11E-02	2,35E-03	-1,66E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-1,83E-01	3,66E-05	6,20E-03	0,00E+00	1,08E-05	2,74E-01	1,06E-05	3,63E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	3,40E-01	1,03E-06	4,38E-06	0,00E+00	2,76E-07	2,72E-06	6,01E-08	-1,20E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	2,68E+01	1,16E-01	9,72E-03	0,00E+00	3,34E-02	6,02E-02	2,31E-03	-1,55E+00
Ozone depletion	kgCFC11eq	3,13E-06	2,72E-08	7,75E-10	0,00E+00	7,92E-09	9,30E-09	4,96E-10	-4,81E-08
Acidification	mol H+eq	2,00E-01	8,55E-04	2,45E-05	0,00E+00	1,51E-04	3,38E-04	2,45E-05	-5,22E-03
Eutrophication, freshwater	kg P eq	1,43E-03	6,11E-08	1,08E-07	0,00E+00	1,81E-08	1,28E-06	7,18E-09	-6,79E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	4,39E-03	1,88E-07	3,33E-07	0,00E+00	5,56E-08	3,92E-06	2,20E-08	-2,08E-04
Eutrophication, marine	kg N eq	2,14E-02	2,68E-04	9,53E-06	0,00E+00	5,57E-05	9,30E-05	1,07E-05	-1,39E-03
Eutrophication, terrestrial	mol N eq	2,39E-01	2,96E-03	8,23E-05	0,00E+00	6,11E-04	1,03E-03	1,17E-04	-1,35E-02
Photochemical ozone formation	kg NMVOCeq	8,49E-02	7,63E-04	2,55E-05	0,00E+00	1,59E-04	2,87E-04	3,25E-05	-1,01E-02
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	1,43E-03	4,70E-09	9,93E-09	0,00E+00	1,47E-09	1,27E-09	1,14E-10	2,65E-07
Resource use, fossils <sup>2</sup>	MJ	4,19E+02	1,63E+00	6,56E-02	0,00E+00	4,73E-01	9,20E-01	3,16E-02	-2,24E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	8,36E+00	-2,69E-04	1,02E-03	0,00E+00	-7,46E-05	1,21E-02	1,18E-05	1,07E-01

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 3,5 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	1,54E-06	1,12E-08	3,94E-10	0,00E+00	3,46E-09	4,40E-09	6,51E-10	-9,16E-08
Ionising radiation <sup>1</sup>	kBq U-235 eq	2,16E+00	7,08E-03	2,24E-04	0,00E+00	2,05E-03	2,44E-03	1,33E-04	6,36E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	8,15E+02	7,00E-01	5,04E-02	0,00E+00	2,08E-01	3,10E-01	1,40E-02	-4,03E+01
Human toxicity, cancer <sup>2</sup>	CTUh	6,06E-08	1,09E-11	8,05E-12	0,00E+00	2,90E-12	5,20E-12	1,86E-13	2,44E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	1,48E-06	1,32E-09	6,49E-11	0,00E+00	4,06E-10	2,39E-10	2,17E-11	-2,65E-08
Land use <sup>2</sup>	Pt	9,44E+01	4,39E-03	1,55E-02	0,00E+00	1,29E-03	3,35E-02	3,87E-02	-1,36E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 3,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1,12E+02	2,47E-03	4,30E-03	0,00E+00	7,23E-04	4,72E-02	9,01E-05	-4,44E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,15E+02	2,47E-03	4,30E-03	0,00E+00	7,23E-04	4,72E-02	9,01E-05	-4,44E+00
PENRE	MJ	3,98E+02	1,63E+00	6,56E-02	0,00E+00	4,73E-01	9,20E-01	3,16E-02	-2,24E+01
PENRM	MJ	2,09E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	4,19E+02	1,63E+00	6,56E-02	0,00E+00	4,73E-01	9,20E-01	3,16E-02	-2,24E+01
Use of secondary material	kg	7,56E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	8,06E-01	4,83E-06	2,97E-05	0,00E+00	1,47E-06	3,24E-04	6,41E-07	6,86E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 3,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	8,43E-02	3,99E-06	1,63E-07	0,00E+00	1,24E-06	1,13E-06	8,01E-08	-2,40E-04
Non-hazardous waste disposed	kg	4,44E+00	7,01E-05	7,03E-02	0,00E+00	2,13E-05	3,65E-04	9,44E-01	8,51E-01
Radioactive waste disposed	kg	2,03E-03	1,17E-05	3,15E-07	0,00E+00	3,38E-06	3,30E-06	2,19E-07	5,29E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 3,5 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	8,51E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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## 1 m<sup>2</sup> – powder coated aluminium sheet – thickness 4,0 mm – 10,8 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 4,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	3,01E+01	1,33E-01	1,22E-02	0,00E+00	3,84E-02	7,10E-02	2,70E-03	-1,50E+00
Climate change – Fossil	kgCO <sub>2</sub> eq	2,99E+01	1,33E-01	6,04E-03	0,00E+00	3,84E-02	6,99E-02	2,69E-03	-1,86E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-1,35E-01	4,17E-05	6,20E-03	0,00E+00	1,23E-05	2,74E-01	1,21E-05	3,64E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	3,81E-01	1,18E-06	4,38E-06	0,00E+00	3,15E-07	3,12E-06	6,87E-08	-1,13E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	2,96E+01	1,32E-01	9,72E-03	0,00E+00	3,82E-02	6,88E-02	2,65E-03	-1,74E+00
Ozone depletion	kgCFC11eq	3,39E-06	3,10E-08	7,75E-10	0,00E+00	9,05E-09	1,06E-08	5,67E-10	-5,16E-08
Acidification	mol H+eq	2,24E-01	9,74E-04	2,45E-05	0,00E+00	1,73E-04	3,86E-04	2,80E-05	-5,84E-03
Eutrophication, freshwater	kg P eq	1,61E-03	6,96E-08	1,08E-07	0,00E+00	2,07E-08	1,46E-06	8,21E-09	-7,78E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	4,94E-03	2,14E-07	3,33E-07	0,00E+00	6,35E-08	4,49E-06	2,52E-08	-2,39E-04
Eutrophication, marine	kg N eq	2,37E-02	3,06E-04	9,53E-06	0,00E+00	6,36E-05	1,06E-04	1,22E-05	-1,53E-03
Eutrophication, terrestrial	mol N eq	2,66E-01	3,37E-03	8,23E-05	0,00E+00	6,99E-04	1,18E-03	1,34E-04	-1,51E-02
Photochemical ozone formation	kg NMVOCeq	9,46E-02	8,70E-04	2,55E-05	0,00E+00	1,82E-04	3,28E-04	3,72E-05	-1,14E-02
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	1,64E-03	5,36E-09	9,93E-09	0,00E+00	1,68E-09	1,45E-09	1,31E-10	2,61E-07
Resource use, fossils <sup>2</sup>	MJ	4,61E+02	1,86E+00	6,56E-02	0,00E+00	5,40E-01	1,05E+00	3,61E-02	-2,40E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	9,15E+00	-3,07E-04	1,02E-03	0,00E+00	-8,53E-05	1,38E-02	1,35E-05	1,46E-01

### Additional environmental impact indicators: 1 m<sup>2</sup> – powder coated aluminium sheet – 4,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	1,73E-06	1,27E-08	3,94E-10	0,00E+00	3,96E-09	5,03E-09	7,44E-10	-1,02E-07
Ionising radiation <sup>1</sup>	kBq U-235 eq	2,44E+00	8,07E-03	2,24E-04	0,00E+00	2,35E-03	2,79E-03	1,53E-04	7,13E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	9,21E+02	7,98E-01	5,04E-02	0,00E+00	2,38E-01	3,54E-01	1,61E-02	-4,67E+01
Human toxicity, cancer <sup>2</sup>	CTUh	6,85E-08	1,24E-11	8,05E-12	0,00E+00	3,32E-12	5,95E-12	2,13E-13	2,79E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	1,68E-06	1,50E-09	6,49E-11	0,00E+00	4,65E-10	2,74E-10	2,48E-11	-3,03E-08
Land use <sup>2</sup>	Pt	9,87E+01	5,01E-03	1,55E-02	0,00E+00	1,48E-03	3,83E-02	4,42E-02	-1,37E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – powder coated aluminium sheet – 4,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1,25E+02	2,81E-03	4,30E-03	0,00E+00	8,26E-04	5,39E-02	1,03E-04	-4,29E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,28E+02	2,81E-03	4,30E-03	0,00E+00	8,26E-04	5,39E-02	1,03E-04	-4,29E+00
PENRE	MJ	4,41E+02	1,86E+00	6,56E-02	0,00E+00	5,40E-01	1,05E+00	3,61E-02	-2,40E+01
PENRM	MJ	2,01E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	4,61E+02	1,86E+00	6,56E-02	0,00E+00	5,40E-01	1,05E+00	3,61E-02	-2,40E+01
Use of secondary material	kg	8,64E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	9,10E-01	5,51E-06	2,97E-05	0,00E+00	1,68E-06	3,70E-04	7,33E-07	8,18E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – powder coated aluminium sheet – 4,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	9,62E-02	4,55E-06	1,63E-07	0,00E+00	1,42E-06	1,29E-06	9,16E-08	-2,74E-04
Non-hazardous waste disposed	kg	5,02E+00	7,99E-05	7,03E-02	0,00E+00	2,43E-05	4,17E-04	1,08E+00	9,72E-01
Radioactive waste disposed	kg	2,28E-03	1,33E-05	3,15E-07	0,00E+00	3,86E-06	3,78E-06	2,51E-07	5,96E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – powder coated aluminium sheet – 4,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,04E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	9,72E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	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



## 1 m<sup>2</sup> – decorated aluminium sheet – thickness 4,0 mm – 10,8 kg/m<sup>2</sup>

### Core environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 4,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Climate change	kgCO <sub>2</sub> eq	3,04E+01	1,33E-01	1,22E-02	0,00E+00	3,84E-02	7,10E-02	2,70E-03	-1,50E+00
Climate change – Fossil	kgCO <sub>2</sub> eq	3,02E+01	1,33E-01	6,04E-03	0,00E+00	3,84E-02	6,99E-02	2,69E-03	-1,86E+00
Climate change – Biogenic	kgCO <sub>2</sub> eq	-1,35E-01	4,17E-05	6,20E-03	0,00E+00	1,23E-05	2,74E-01	1,21E-05	3,64E-01
Climate change – LULUC	kgCO <sub>2</sub> eq	3,86E-01	1,18E-06	4,38E-06	0,00E+00	3,15E-07	3,12E-06	6,87E-08	-1,13E-03
Climate change – GWP-GHG	kgCO <sub>2</sub> eq	2,99E+01	1,32E-01	9,72E-03	0,00E+00	3,82E-02	6,88E-02	2,65E-03	-1,74E+00
Ozone depletion	kgCFC11eq	3,43E-06	3,10E-08	7,75E-10	0,00E+00	9,05E-09	1,06E-08	5,67E-10	-5,16E-08
Acidification	mol H+eq	2,25E-01	9,74E-04	2,45E-05	0,00E+00	1,73E-04	3,86E-04	2,80E-05	-5,84E-03
Eutrophication, freshwater	kg P eq	1,62E-03	6,96E-08	1,08E-07	0,00E+00	2,07E-08	1,46E-06	8,21E-09	-7,78E-05
Eutrophication, freshwater	kg PO <sub>4</sub> eq	4,97E-03	2,14E-07	3,33E-07	0,00E+00	6,35E-08	4,49E-06	2,52E-08	-2,39E-04
Eutrophication, marine	kg N eq	2,39E-02	3,06E-04	9,53E-06	0,00E+00	6,36E-05	1,06E-04	1,22E-05	-1,53E-03
Eutrophication, terrestrial	mol N eq	2,69E-01	3,37E-03	8,23E-05	0,00E+00	6,99E-04	1,18E-03	1,34E-04	-1,51E-02
Photochemical ozone formation	kg NMVOCeq	9,54E-02	8,70E-04	2,55E-05	0,00E+00	1,82E-04	3,28E-04	3,72E-05	-1,14E-02
Resource use, minerals and metals <sup>2</sup>	kg Sb eq	1,64E-03	5,36E-09	9,93E-09	0,00E+00	1,68E-09	1,45E-09	1,31E-10	2,61E-07
Resource use, fossils <sup>2</sup>	MJ	4,67E+02	1,86E+00	6,56E-02	0,00E+00	5,40E-01	1,05E+00	3,61E-02	-2,40E+01
Water scarcity <sup>2</sup>	m <sup>3</sup> depriv.	9,26E+00	-3,07E-04	1,02E-03	0,00E+00	-8,53E-05	1,38E-02	1,35E-05	1,46E-01

### Additional environmental impact indicators: 1 m<sup>2</sup> – decorated aluminium sheet – 4,0 mm

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Particulate matter	disease inc.	1,73E-06	1,27E-08	3,94E-10	0,00E+00	3,96E-09	5,03E-09	7,44E-10	-1,02E-07
Ionising radiation <sup>1</sup>	kBq U-235 eq	2,45E+00	8,07E-03	2,24E-04	0,00E+00	2,35E-03	2,79E-03	1,53E-04	7,13E-02
Ecotoxicity, freshwater <sup>2</sup>	CTUe	9,23E+02	7,98E-01	5,04E-02	0,00E+00	2,38E-01	3,54E-01	1,61E-02	-4,67E+01
Human toxicity, cancer <sup>2</sup>	CTUh	6,86E-08	1,24E-11	8,05E-12	0,00E+00	3,32E-12	5,95E-12	2,13E-13	2,79E-08
Human toxicity, non-cancer <sup>2</sup>	CTUh	1,68E-06	1,50E-09	6,49E-11	0,00E+00	4,65E-10	2,74E-10	2,48E-11	-3,03E-08
Land use <sup>2</sup>	Pt	9,93E+01	5,01E-03	1,55E-02	0,00E+00	1,48E-03	3,83E-02	4,42E-02	-1,37E+01

1 - "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."

2 - "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."

**Parameters describing resource use: 1 m<sup>2</sup> – decorated aluminium sheet – 4,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
PERE	MJ	1,26E+02	2,81E-03	4,30E-03	0,00E+00	8,26E-04	5,39E-02	1,03E-04	-4,29E+00
PERM	MJ	2,88E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PERT	MJ	1,29E+02	2,81E-03	4,30E-03	0,00E+00	8,26E-04	5,39E-02	1,03E-04	-4,29E+00
PENRE	MJ	4,46E+02	1,86E+00	6,56E-02	0,00E+00	5,40E-01	1,05E+00	3,61E-02	-2,40E+01
PENRM	MJ	2,09E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
PENRT	MJ	4,67E+02	1,86E+00	6,56E-02	0,00E+00	5,40E-01	1,05E+00	3,61E-02	-2,40E+01
Use of secondary material	kg	8,64E+00	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	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
Use of non-renewable secondary fuels	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
Use of net fresh water	m <sup>3</sup>	9,13E-01	5,51E-06	2,97E-05	0,00E+00	1,68E-06	3,70E-04	7,33E-07	8,18E-03

**Environmental information describing waste categories: 1 m<sup>2</sup> – decorated aluminium sheet – 4,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	9,62E-02	4,55E-06	1,63E-07	0,00E+00	1,42E-06	1,29E-06	9,16E-08	-2,74E-04
Non-hazardous waste disposed	kg	5,02E+00	7,99E-05	7,03E-02	0,00E+00	2,43E-05	4,17E-04	1,08E+00	9,72E-01
Radioactive waste disposed	kg	2,29E-03	1,33E-05	3,15E-07	0,00E+00	3,86E-06	3,78E-06	2,51E-07	5,96E-05

**Environmental information describing output flows: 1 m<sup>2</sup> – decorated aluminium sheet – 4,0 mm**

Impact indicator	Unit	A1-3	A4	A5	C1	C2	C3	C4	D
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
Materials for recycling	kg	6,30E-01	0,00E+00	1,38E-01	0,00E+00	0,00E+00	9,72E+00	0,00E+00	0,00E+00
Materials for energy recovery	kg	0,00E+00	0,00E+00	2,80E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, electrical	MJ	0,00E+00	0,00E+00	1,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00
Exported energy, thermal	MJ	0,00E+00	0,00E+00	2,86E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00

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## ADDITIONAL INFORMATION

### BIOGENIC CARBON CONTENT

Aluminium powder coated / decorated sheet	Values	unit
Biogenic carbon in the aluminium sheets	0	kg C
Biogenic carbon in the packaging	2,90	kg C

*1 kg biogenic carbon is equivalent to 44/12 kg of CO<sub>2</sub>*

### ENERGY MIX

The energy source analyzed in module A3 comes from the Italian Residual Mix ; the potential impact related to the consumption of 1 kWh of electricity from the grid is 0,533 kgCO<sub>2</sub>eq. The impact data (GWP-GHG indicator) was obtained through the software SimaPro version 9.3.0.3.

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