

ENVIRONMENTAL PRODUCT DECLARATION

EPD Ref. No. 2024-0054-2

PROFILED STEEL ELEMENTS



OWNER OF THE EPD:

PRUSZYŃSKI Sp. z o. o.
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In accordance with EN 15804+A2

EPD PROGRAM OPERATOR:

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Declared unit (DU): 1 m²

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1. GENERAL INFORMATION


This Environmental Product Declaration (EPD) is developed in accordance with the European standard EN 15804 and ISO 14025. It contains the information on the impacts of the declared construction materials on the environment.

EPDs may not be comparable if they do not comply with the EN 15804 standard and if the core systems are not based on the same database.

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Declared product(s)	Profiled steel elements: <ul style="list-style-type: none">• Trapezoidal sheets• Metal roof tiles• Wall cassettes• Cold-bent profiles
Declaration reference number	EPD Ref. No. 2024-0054-2
PCR	PCR in accordance with EN 15804:2012+A2:2019
Date of issue	07-08-2024
Validity date	07-08-2029
Declared unit	1 m ²
Life cycle analysis (LCA)	A1-A3, C1-C4, D modules
Service Life	Depending of application type, equal to the service life of the building
Reason for performing LCA	Bussines-to-bussines (B2B)
Representativeness	Polish product, 2023

2. VERIFICATION

This Environmental Product Declaration (EPD) has been verified in accordance with ISO14025 and is valid for 5 years from the date of issue if the underlying data have not changed significantly.

CEN EN 15804 standard serves as the main PCR document.
Independent verification corresponding to ISO 14025:2010 <input type="checkbox"/> Internal <input checked="" type="checkbox"/> External
Third party verifier:  Monika Kotkiewicz, CERTBUD Sp. z o.o.
External verification of EPD: Monika Kotkiewicz, CERTBUD Sp. z o. o. Input data verification, LCA: Krzysztof Bałkowiec, TBF Systemy Jakości Verification of LCA: Monika Kotkiewicz, CERTBUD Sp. z o. o.

Note: CERTBUD Sp. z o. o. is a notified body (No. 2310) of the European Commission and Member States designated for the tasks specified in the Regulation (EU) No 305/2011 of the European Parliament and of the Council laying down harmonised conditions for the marketing of construction products. In addition, CERTBUD Sp. z o.o. is a unit accredited by the Polish Centre for Accreditation - in the field of certification of construction products (accreditation number AC 158). CERTBUD Sp. z o.o. acts as an independent, third-party verification organization (17065/17025 certified).



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3. MANUFACTURER

3.1. BASIC INFORMATION

Pruszyński Sp. z o.o. is the largest Polish manufacturer of steel roofing and facades and one of the biggest in Europe in this industry. The company is located in Sokołów, Poland. Blachy Pruszyński has started the production in 1985 by launched the production of tin accessories. Since the beginning of the activity, the company has been constantly developing and expanding construction products range.



Figure 3.1: A view of the Pruszyński Sp. z o.o. production hall

The company's commercial offer includes:

- Custom-made Steel Tiles, trapezoidal sheets
- Steel profiles
- Sandwich panels with PIR and MW core
- Elevation cassettes and panels
- Sheet metal processes
- Steel cassettes
- Smoke curtains

Each product is created individually for the needs of specific order using the latest technologies and machines and the use of the best raw materials.

3.2. MACHINE PARK

Internal logistics in the production process are based on 3 cranes, over 40 leading and side forklifts and specialized loading prams. All production lines and machines are served by experienced and highly qualified staff.

The machinery park covers over 100 modern machines, including:

- 8 production lines for the production of roof tiles
- 2 modern lines for the production of a complete gutter system
- 25 production lines for trapezoidal profiles
- Line for the production of facade cassettes
- Line for the production of wall cassettes
- 4 lines with guillotines for flat sheets
- 3 lines for the production of roof gags



Figure 3.2: Saw line

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- 2 lines for the production of cover for the so-called standing
- Line for the production of wall panels
- Line for the production of sandwich panels with a core of mineral wool
- Line for the production of sandwich panels with polyurethane core

All products have adequate technical and hygiene certification and meet the quality requirements for construction products.



Figure 3.3: Technological line for the production of sandwich panels

4. DESCRIPTION AND CLASSIFICATION OF PRODUCTS

Profiled steel elements produced at the PRUSZYŃSKI sp. z o. o. production plant consist of: trapezoidal sheets, metal roof tiles, wall cassettes and cold-headed construction profiles. Each type of product is manufactured on a separate production line, but most processes (rolling, forming, cutting) are similar for all products.

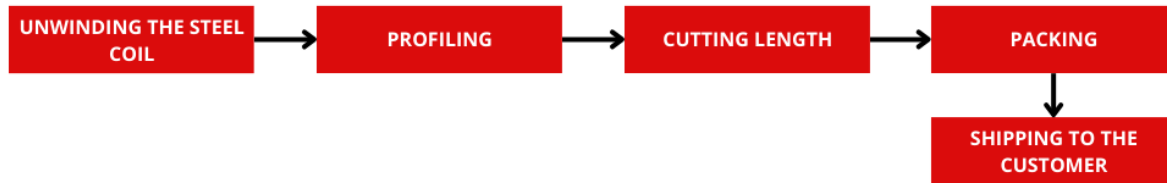


Figure 4.1: Profiled steel elements production scheme

Trapezoidal sheets

Trapezoidal sheets are characterized by strength, rigidity of the structure and the economy of use. They are used as a structural element of industrial, office, public, commercial, sports and single-family buildings, as well as roof coverings and elements of facade solutions. Additionally, they can be equipped with a special non-woven fabric on the underside as an anti-condensation coating, which provides increased protection against moisture by absorbing water vapor.



Figure 4.2: Trapezoidal sheet

Technical parameters:

- Thickness of the steel: 0.50 mm – 1.50 mm
- Steel grade:
 - Trapezoidal roofs: S 250 GD - S 320 GD
 - Trapezoidal construction: S 250 GD - S 320 GD
 - Trapezoidal elevation: S 250 GD - S 280 GD
- Profile height:
 - Trapezoidal roofs: 14 mm – 60 mm
 - Trapezoidal construction: 35 mm – 200 mm
 - Trapezoidal elevation: 6 mm – 60 mm

Assortment:

- Trapezoidal roofs: T14, T18, T18 OCYNK, T18DR, T18P, T20, TP26 SUPER, T35, T40, T45, T45P, T50P, T55P, T60P
- Trapezoidal construction: T35, T40, T45, T45P, T50P, T55P, T60P, T84, T92P, T94, T130, T133, T135, T135P, T140, T147, T150, T155, T160, T200
- Trapezoidal elevation: T6, T7P, T8, T14, T18P, T18, T18DR, T18 OCYNK, T20, T35E, T35EL, T40, T45, T45P, T50P, T55P, T60P

Metal roof tiles

The roof tile is an elegant and permanent roofing, and at the same time one of the lightest roofing materials. Modern roof tiles in Pruszyński sheets are made of the highest quality sheet protected with protective coatings, which they owe durability and aesthetic finish. Thus, they become a universal material for roofs, and are used in the construction of single and multi-family houses, outbuildings, religious buildings and the renovation of old roofs. The products are available in a wide range of colors, with the choice of colors depends on the chosen protective coating.



Figure 4.3: Metal roof tile

Technical parameters:

- Thickness of the steel: 0.50 mm
- Profile height: 23 mm – 35 mm

Assortment:

- PŁASKA
- PŁASKA PLUS
- LOARA
- RUBIN
- OPTIMA
- REN
- SZAFIR
- TIGRA
- MODUS
- REGLE
- FIORD
- KARO
- PANEL DACHOWY NA RĄBEK
- TP 26 SUPER

Wall cassettes

Wall cassettes are light materials for fast walls, mainly industrial and warehouse halls. Their biggest advantage is: ease of assembly, multifunctionality, high strength of elements. The building can be easily insulated with thermal insulation, which allows the use of comprehensive solutions for the lightweight hall building system. The whole structure is characterized by high stiffness, tightness and a low weight of the right sheet. An additional advantage is the high aesthetics of the facade and resistance to mechanical damage.

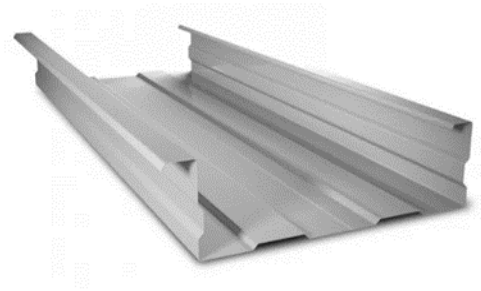


Figure 4.4: Steel wall cassette

Technical parameters:

- Thickness of the steel: 0.75 mm – 1.50 mm
- Steel grade: min. S 320 GD
- Profile height: 100 mm - 200 mm

Assortment:

- 600/200P, 600/180P, 600/160P, 600/150P, 600/140P, 600/120P, 600/110P, 500/200P, 500/180P, 500/160P, 500/150P, 500/140P, 500/120P, 500/110P

Cold-headed construction profiles

Cold-headed construction profiles of the Z, C and σ type are made of cold-plated steel. Their names refer to the shape of the vertical cross-section. Typical use of profiles most often includes: construction of cover and partition walls, construction of ceiling and hood beams, walls of walls or roofing purlins. An element that facilitates installation are mounting holes, thanks to which it is possible to rigidly and permanently connect the sections using screws or rivets.



Figure 4.5: Cold-headed construction profile

Technical parameters:

- Thickness of the steel: 0.70 mm – 3.50 mm
- Steel grade: S 280 GD, S 320 GD, S 390 GD
- Profile height:
 - Sigma: 140 mm - 350 mm
 - Sigma Plus: 200 mm - 350 mm
 - C Profiles: 100 mm - 400 mm
 - C+ Profiles: 140 mm - 350 mm
 - Z Profiles: 100 mm - 400 mm
 - U Profiles: 100 mm - 400 mm
 - Omega: 20 mm – 50 mm

Assortment:

- Sigma
- Sigma Plus
- C Profiles
- C+ Profiles
- Z Profiles
- U Profiles
- Omega

5. LIFE CYCLE ASSESSMENT (LCA) - RULES

5.1. DECLARED UNIT (DU)

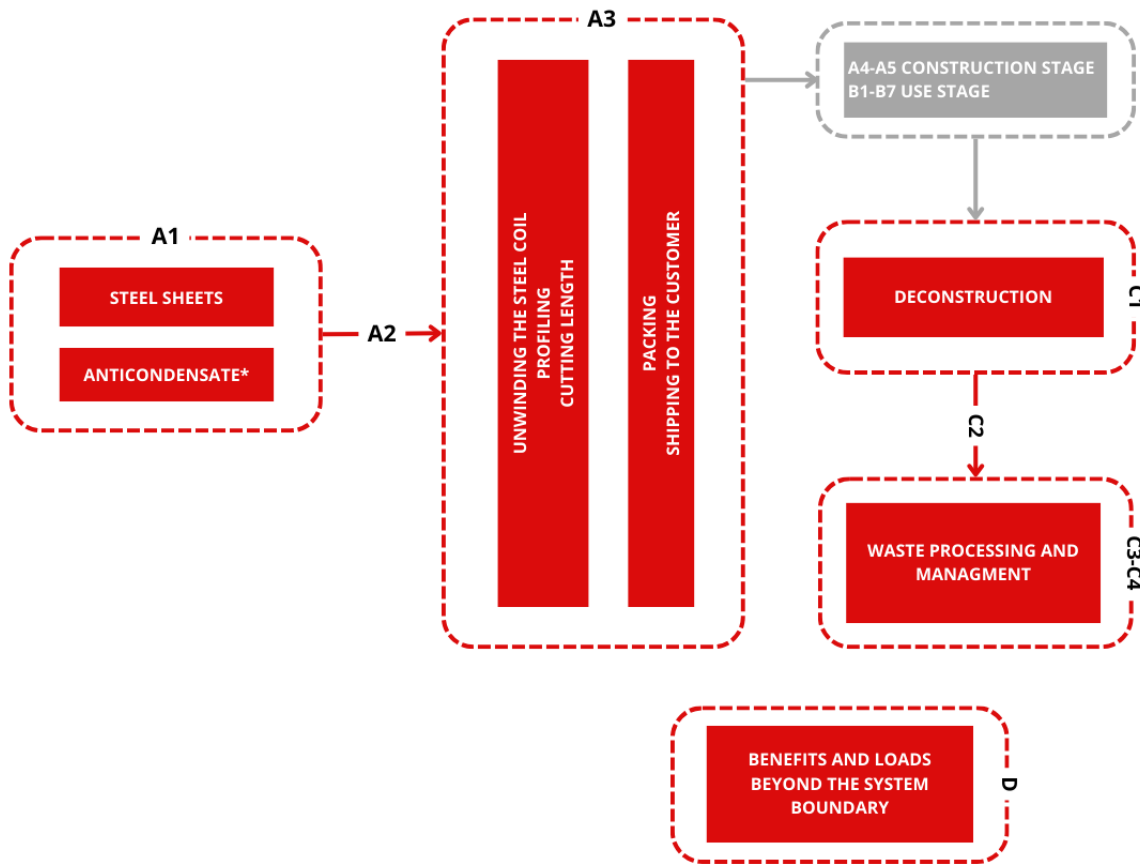
The declaration refers to declared unit – 1 m² of steel element manufactured by PRUSZYŃSKI sp. z o. o.

5.2. ALLOCATION

The allocation rules used for this EPD are based on EN 15804+A2. The production of profiled steel elements is a process carried out in one production plant of PRUSZYŃSKI sp. z o. o. located in Sokołów, Poland. For the life cycle assessment (LCA) calculation purpose – mass basis allocation was done.

5.3. SYSTEM BOUNDARIES

The system limits for the environmental characteristics of profiled steel elements are shown in figure 5.1. Data used in LCA calculation were declared by manufacturer and reflected the actual status of the year 2023.



* only for trapezoidal sheets and metal roof tiles

Fig. 5.1: System boundaries used for environmental characterization

Legend:

----- defined modules

----- undefined modules

This Environmental Product Declaration includes a life cycle assessment (LCA) for the Cradle-to-Gate (A1-A3), with C1-C4 and D according to EN 15804+A2.

Impacts from the global line production PRUSZYŃSKI Sp. z o. o. were inventoried and 62 % were allocated to the production of profiled steel elements.

All-important parameters from collected production data, i.e. all materials used by recipe, electricity consumed, internal fuel consumption and thermal energy, direct production waste, and the results of all available emission measurements were included in the calculations. In accordance with EN 15804, machinery and equipment (capital assets) needed for and during production, as well as the transportation of production facility employees, were not included.

The sum of omitted total flows does not exceed 1% and excluded consumption of renewable and non-renewable primary energy is no more than 1% according to EN 15804+A2.

5.3.1. A1 – RAW MATERIALS SUPPLY

This module takes into account the extraction and processing of all raw materials, as well as Energy consumption. The extraction and consumption of raw materials refers to specific mass shares in the production process per unit of declared product. Raw materials for the production of components of profiled steel elements come from Polish and foreign suppliers.

5.3.2. A2 – TRANSPORT TO THE PRODUCTION SITE

Raw materials are transported to the production plant from Polish and foreign suppliers. Distances from the place of obtaining raw materials to the production plant are individual for each raw material. The means of transport were diversified depending on the method of delivery of raw materials. The adopted model includes road transport (average values) for each raw material. For calculation purposes European fuel averages are applied in module A2.

5.3.3. A3 – PRODUCTION

Module A3 covers all production-related process – including the production of profiled steel elements components, their packaging and internal transport.

A schematic of the production line for profiled steel elements is shown in Fig. 4.1.

This module takes into account energy consumption and wastages generated in the production plant, as well as losses generated in the production process.

5.3.4. C1-C2 - DEMOLITION AND TRANSPORT

The end of life stage commences with demolition. C1 module covers object's deconstruction within selective waste collection at deconstruction location (tab. 5.1).

C2 module is the beginning of waste treatment and describe waste transport. It was assumed that waste transport carried out to waste management plant and landfill (tab. 5.1). For calculation purposes European fuel averages are applied.

5.3.5. C3-C4 - WASTE PROCESSING AND MANAGEMENT

For the purpose of life cycle analysis, scenarios were developed for modules C3 and C4. It was assumed that 98% of steel scrap would undergo recycling and remaining 2% will end up on a landfill in the form of mixed construction and demolition waste (tab. 5.1).

Table 5.1: The end-of-life stage assumption for profiled steel elements

Module	Assumption
C1	<ul style="list-style-type: none">• 42.8 MJ/kg – Energy value of diesel
C2	<ul style="list-style-type: none">• 50 km to the landfill• 50 km to the waste management plant
C3	<ul style="list-style-type: none">• 98% recycling
C4	<ul style="list-style-type: none">• 2% landfilling

5.3.6. D - BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDRY

Module D covers the environmental benefits and loads of reusing, recovering or recycling steel structures at the end of life cycle, which will be incorporated into life cycle of a new product as recycled materials. The positive environmental impact was assumed to result from the reuse of recycled steel. In the recycling process, steel scrap is incorporated into the production of a new product.

DATA COLLECTION PERIOD	The data regarding the production of products refer to period from 01.01.2023 to 31.12.2023.
DATA QUALITY	The values determined to calculate the LCA originate from verified PRUSZYŃSKI Sp. z o. o. inventory data. The LCA analysis uses data prepared based on actual consumption at the production site. The details collected are no more than two years old.
CALCULATION RULES	The impacts of the representative PRUSZYŃSKI Sp. z o. o. products were aggregated using weighted average. The weighted average method was used according to the percentage of each product in PRUSZYŃSKI Sp. z o. o. based on the relations to whole production quantity. Impacts were calculated for all profiled steel elements and are shown in Tables 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19 and 6.20. The LCA analysis was conducted in accordance with the EN 15804+A2.
BACKGROUND DATA	The main source of general and auxiliary data is the Ecoinvent 3.9 database and specified Environmental Product Declarations.

6. LIFE CYCLE ASSESSMENT (LCA) - RESULTS

Life cycle assessment (LCA) of this environmental declaration covers A1-A3, C1 – C4, D modules („cradle to gate” with C1 – C4, D modules). Table 6.1 shows the LCA modules considered in calculating the environmental impact categories for the products covered by this declaration.

Table 6.1: Modules defined and not declared in system boundaries

Product stage			Construction process stage		Use stage							End of life stage				
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use stage	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse, recovery, recycling potential
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	X	X	X

X – modules defined

MND – modules not declared

Indicators describing environmental impact of product can be categorized as general environmental impacts, additional impacts and environmental aspects related to resources. The abbreviations and its explanations used to describe the environmental impact of profiled steel elements are shown below (tab. 6.2).

The tables 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.10, 6.11, 6.12, 6.13, 6.14, 6.15, 6.16, 6.17, 6.18, 6.19 and 6.20 present the results of the LCA analysis for mentioned above products.

Tabel 6.2: Abbreviations and its explanations used in LCA analysis

ENVIRONMENTAL IMPACT INDICATORS	
GWP-total	Global Warming Potential – total
GWP-fossil	Global Warming Potential - fossil
GWP-biogenic	Global Warming Potential - biogenic
GWP-luluc	Global Warming Potential - land use and land use change
ODP	Stratospheric ozone depletion potential

AP	Soil and water acidification potential
EP-freshwater	Eutrophication potential - freshwater
EP-marine	Eutrophication potential - seawater
EP-terrestrial	Eutrophication potential - terrestrial
POCP	Potential for photochemical ozone synthesis
ADP-minerals & metals*	Potential for depletion of abiotic resources - non-fossil resources
ADP-fossil*	Abiotic depletion potential – fossil fuels
WDP*	Water deprivation potential

ADDITIONAL ENVIRONMENTAL IMPACTS INDICATORS

PM	Particulate matter
IRP**	Potential human exposure efficiency relative to U235
ETP-fw*	Potential comparative toxic unit for ecosystems
HTP-c*	Potential comparative toxic unit for humans (cancer effects)
HTP-nc*	Potential comparative toxic unit for humans (non-cancer effects)
SQP*	Potential soil quality index

ENVIRONMENTAL ASPECTS RELATED TO RESOURCE INDICATORS

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
PEN-RE	Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials
RE	Use of non-renewable primary energy resources used as raw materials
PENRT	Total use of non-renewable primary energy resources
SM	Use of secondary material
RSF	Use of renewable secondary fuels
NRSF	Use of non-renewable secondary fuels
FW	Use of net fresh water

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES INDICATORS

HWD	Hazardous waste disposed
NHWD	Non-hazardous waste disposed
RWD	Radioactive waste disposed
CRU	Components for reuse
MFR	Materials for recycling
MER	Materials for energy recovery
EEE	Exported electrical energy
EET	Exported thermal energy

*The results should be used with caution because there is high uncertainty or limited experience with this indicators.

** Apply mainly the possible impact of the nuclear fuel cycle on human health resulting from low ionizing radiation.

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Table 6.3: LCA analysis results for profiled steel elements with thickness 0.50 mm

Results per 1 m ² : profiled steel elements 0.50 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	1.34E+01	3.67E-01	1.44E-01	1.39E+01	2.38E-02	2.48E-02	1.24E-01	5.61E-04	-8.12E+00
GWP-fossil	eq. kg CO2	1.33E+01	3.66E-01	1.40E-01	1.38E+01	2.38E-02	2.48E-02	1.26E-01	5.59E-04	-8.00E+00
GWP-biogenic	eq. kg CO2	3.48E-02	3.24E-04	3.84E-03	3.90E-02	5.16E-06	1.90E-05	-2.22E-03	1.69E-06	-1.10E-01
GWP-luluc	eq. kg CO2	8.81E-01	1.81E-04	4.21E-05	8.82E-01	2.68E-06	1.21E-05	1.84E-04	1.10E-07	-1.00E-02
ODP	eq. kg CFC 11	9.85E-09	7.97E-09	1.31E-09	1.91E-08	3.79E-10	5.63E-10	1.99E-09	1.94E-11	-3.53E-09
AP	mol H+	2.66E-02	8.01E-04	9.97E-04	2.84E-02	2.21E-04	6.14E-05	1.41E-03	3.61E-06	-1.97E-02
EP-freshwater	eq. kg P	2.63E-03	2.60E-05	1.59E-04	2.81E-03	7.32E-07	1.83E-06	7.40E-05	2.61E-08	-1.42E-04
EP-marine	eq. kg N	5.49E-03	2.02E-04	1.49E-04	5.84E-03	1.02E-04	1.67E-05	3.28E-04	1.58E-06	-2.52E-04
EP-terrestrial	eq. mol N	7.86E-02	2.05E-03	1.27E-03	8.19E-02	1.11E-03	1.72E-04	3.66E-03	1.69E-05	-2.65E-03
POCP	eq. kg NMVOC	6.90E-03	1.24E-03	4.11E-04	8.55E-03	3.30E-04	1.00E-04	1.10E-03	6.70E-06	-3.27E-03
ADP-minerals & metals	eq. kg Sb.	8.89E-04	1.23E-06	5.40E-07	8.91E-04	8.53E-09	7.11E-08	7.75E-06	6.02E-10	1.01E-06
ADP-fossil	MJ	1.28E+02	5.24E+00	1.88E+00	1.35E+02	3.14E-01	3.79E-01	1.72E+00	1.43E-02	-6.44E+01
WDP	eq. m3	2.54E-01	2.60E-02	2.92E-02	3.09E-01	7.77E-04	1.95E-03	2.85E-02	4.93E-05	-4.37E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	4.63E-08	2.73E-08	2.33E-09	7.59E-08	6.16E-09	2.46E-09	1.94E-08	9.11E-11	-1.49E-07
IRP	eq. kBq U235	2.51E-02	7.04E-03	4.49E-03	3.67E-02	1.48E-04	4.75E-04	1.35E-02	1.35E-05	2.29E-01
ETP-fw	CTUe	2.97E+00	2.57E+00	6.37E-01	6.18E+00	1.49E-01	1.81E-01	1.33E+00	6.00E-03	1.14E+00
HTTP-c	CTUh	4.20E-09	1.68E-10	6.43E-11	4.43E-09	7.31E-12	1.11E-11	1.93E-10	1.90E-13	4.02E-08
HTTP-nc	CTUh	1.17E-08	3.72E-09	2.64E-09	1.80E-08	5.13E-11	2.71E-10	8.67E-09	2.52E-12	8.73E-09
SQP	dimensionless	1.78E+00	3.14E+00	3.78E-01	5.30E+00	2.09E-02	3.82E-01	3.02E+00	2.94E-02	-2.85E+00

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ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	9.48E+00	8.18E-02	1.44E-01	9.70E+00	1.78E-03	5.51E-03	2.64E-01	2.83E-04	5.86E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	9.48E+00	8.18E-02	1.44E-01	9.70E+00	1.78E-03	5.51E-03	2.64E-01	2.83E-04	5.86E+00
PEN-RE	MJ	1.33E+02	4.79E+00	1.83E+00	1.40E+02	2.86E-01	3.47E-01	1.62E+00	1.30E-02	-6.08E+01
PENRM	MJ	1.40E-01	4.54E-01	4.62E-02	6.40E-01	2.87E-02	3.29E-02	1.01E-01	1.31E-03	-6.74E-03
PENRT	MJ	1.33E+02	5.24E+00	1.88E+00	1.40E+02	3.14E-01	3.79E-01	1.72E+00	1.43E-02	-6.08E+01
SM	MJ	4.28E-01	5.75E-03	7.89E-03	4.42E-01	1.82E-04	3.80E-04	4.85E+00	1.13E-05	4.31E+00
RSF	MJ	4.70E-03	1.55E-03	4.62E-03	1.09E-02	2.00E-05	9.26E-05	3.45E-03	4.40E-06	3.15E-03
NRSF	MJ	1.93E-02	3.05E-03	1.60E-02	3.84E-02	5.41E-05	1.92E-04	3.97E-03	3.39E-06	2.80E-03
FW	m3	3.28E-02	6.33E-04	3.86E-03	3.72E-02	1.68E-05	5.06E-05	8.04E-04	1.63E-05	2.80E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	1.83E-01	4.92E-03	4.77E-03	1.93E-01	2.61E-04	3.56E-04	7.40E-03	7.31E-06	2.11E-02
NHWD	kg	1.25E-01	2.54E-01	9.67E-02	4.75E-01	1.94E-04	3.27E-02	4.42E-02	9.88E-02	-1.29E-01
RWD	kg	2.09E-03	1.71E-06	1.10E-06	2.09E-03	3.42E-08	1.15E-07	3.45E-06	3.08E-09	1.43E-03
CRU	kg	3.17E-22	-2.00E-22	1.09E-22	2.26E-22	-2.40E-24	-7.21E-24	4.78E-23	-1.53E-24	-2.68E-22
MFR	kg	7.22E-02	5.21E-03	8.18E-03	8.55E-02	1.49E-04	3.27E-04	7.19E-03	1.01E-05	-2.90E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.4: LCA analysis results for profiled steel elements with thickness 0.60 mm

Results per 1 m ² : profiled steel elements 0.60 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	1.60E+01	4.40E-01	1.44E-01	1.66E+01	2.38E-02	2.98E-02	1.48E-01	6.73E-04	-9.75E+00
GWP-fossil	eq. kg CO2	1.60E+01	4.40E-01	1.40E-01	1.66E+01	2.38E-02	2.98E-02	1.51E-01	6.71E-04	-9.60E+00
GWP-biogenic	eq. kg CO2	4.17E-02	3.89E-04	3.84E-03	4.60E-02	5.16E-06	2.28E-05	-2.66E-03	2.03E-06	-1.32E-01
GWP-luluc	eq. kg CO2	1.06E+00	2.17E-04	4.21E-05	1.06E+00	2.68E-06	1.45E-05	2.21E-04	1.32E-07	-1.20E-02
ODP	eq. kg CFC 11	1.18E-08	9.57E-09	1.31E-09	2.27E-08	3.79E-10	6.76E-10	2.39E-09	2.33E-11	-4.24E-09
AP	mol H+	3.20E-02	9.61E-04	9.97E-04	3.39E-02	2.21E-04	7.37E-05	1.69E-03	4.33E-06	-2.37E-02
EP-freshwater	eq. kg P	3.15E-03	3.12E-05	1.59E-04	3.34E-03	7.32E-07	2.20E-06	8.88E-05	3.13E-08	-1.71E-04
EP-marine	eq. kg N	6.59E-03	2.42E-04	1.49E-04	6.98E-03	1.02E-04	2.01E-05	3.94E-04	1.89E-06	-3.03E-04
EP-terrestrial	eq. mol N	9.43E-02	2.46E-03	1.27E-03	9.80E-02	1.11E-03	2.06E-04	4.40E-03	2.03E-05	-3.18E-03
POCP	eq. kg NMVOC	8.28E-03	1.49E-03	4.11E-04	1.02E-02	3.30E-04	1.20E-04	1.32E-03	8.04E-06	-3.92E-03
ADP-minerals & metals	eq. kg Sb.	1.07E-03	1.47E-06	5.40E-07	1.07E-03	8.53E-09	8.53E-08	9.30E-06	7.22E-10	1.21E-06
ADP-fossil	MJ	1.54E+02	6.29E+00	1.88E+00	1.62E+02	3.14E-01	4.55E-01	2.06E+00	1.72E-02	-7.73E+01
WDP	eq. m3	3.05E-01	3.12E-02	2.92E-02	3.65E-01	7.77E-04	2.34E-03	3.42E-02	5.91E-05	-5.24E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	5.56E-08	3.28E-08	2.33E-09	9.07E-08	6.16E-09	2.95E-09	2.33E-08	1.09E-10	-1.79E-07
IRP	eq. kBq U235	3.02E-02	8.45E-03	4.49E-03	4.31E-02	1.48E-04	5.70E-04	1.62E-02	1.63E-05	2.74E-01
ETP-fw	CTUe	3.57E+00	3.09E+00	6.37E-01	7.29E+00	1.49E-01	2.17E-01	1.60E+00	7.20E-03	1.37E+00
HTTP-c	CTUh	5.04E-09	2.01E-10	6.43E-11	5.30E-09	7.31E-12	1.33E-11	2.31E-10	2.28E-13	4.82E-08
HTTP-nc	CTUh	1.40E-08	4.46E-09	2.64E-09	2.11E-08	5.13E-11	3.25E-10	1.04E-08	3.02E-12	1.05E-08
SQP	dimensionless	2.13E+00	3.77E+00	3.78E-01	6.28E+00	2.09E-02	4.59E-01	3.63E+00	3.52E-02	-3.42E+00



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.14E+01	9.81E-02	1.44E-01	1.16E+01	1.78E-03	6.61E-03	3.17E-01	3.39E-04	7.03E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.14E+01	9.81E-02	1.44E-01	1.16E+01	1.78E-03	6.61E-03	3.17E-01	3.39E-04	7.03E+00
PEN-RE	MJ	1.60E+02	5.74E+00	1.83E+00	1.67E+02	2.86E-01	4.16E-01	1.94E+00	1.56E-02	-7.30E+01
PENRM	MJ	1.68E-01	5.45E-01	4.62E-02	7.59E-01	2.87E-02	3.95E-02	1.21E-01	1.57E-03	-8.09E-03
PENRT	MJ	1.60E+02	6.29E+00	1.88E+00	1.68E+02	3.14E-01	4.55E-01	2.06E+00	1.72E-02	-7.30E+01
SM	MJ	5.14E-01	6.90E-03	7.89E-03	5.29E-01	1.82E-04	4.56E-04	5.83E+00	1.36E-05	5.17E+00
RSF	MJ	5.64E-03	1.86E-03	4.62E-03	1.21E-02	2.00E-05	1.11E-04	4.15E-03	5.28E-06	3.78E-03
NRSF	MJ	2.32E-02	3.66E-03	1.60E-02	4.29E-02	5.41E-05	2.30E-04	4.76E-03	4.06E-06	3.37E-03
FW	m3	3.93E-02	7.59E-04	3.86E-03	4.39E-02	1.68E-05	6.08E-05	9.65E-04	1.96E-05	3.36E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	2.20E-01	5.90E-03	4.77E-03	2.31E-01	2.61E-04	4.27E-04	8.88E-03	8.77E-06	2.53E-02
NHWD	kg	1.50E-01	3.05E-01	9.67E-02	5.51E-01	1.94E-04	3.92E-02	5.30E-02	1.19E-01	-1.54E-01
RWD	kg	2.50E-03	2.05E-06	1.10E-06	2.51E-03	3.42E-08	1.38E-07	4.14E-06	3.69E-09	1.72E-03
CRU	kg	3.81E-22	-2.40E-22	1.09E-22	2.49E-22	-2.40E-24	-8.65E-24	5.73E-23	-1.83E-24	-3.22E-22
MFR	kg	8.66E-02	6.25E-03	8.18E-03	1.01E-01	1.49E-04	3.92E-04	8.63E-03	1.22E-05	-3.48E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.5: LCA analysis results for profiled steel elements with thickness 0.63 mm

Results per 1 m ² : profiled steel elements 0.63 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	1.68E+01	4.62E-01	1.44E-01	1.75E+01	2.38E-02	3.13E-02	1.56E-01	7.07E-04	-1.02E+01
GWP-fossil	eq. kg CO2	1.68E+01	4.62E-01	1.40E-01	1.74E+01	2.38E-02	3.13E-02	1.58E-01	7.05E-04	-1.01E+01
GWP-biogenic	eq. kg CO2	4.38E-02	4.09E-04	3.84E-03	4.81E-02	5.16E-06	2.40E-05	-2.80E-03	2.14E-06	-1.39E-01
GWP-luluc	eq. kg CO2	1.11E+00	2.28E-04	4.21E-05	1.11E+00	2.68E-06	1.53E-05	2.32E-04	1.39E-07	-1.26E-02
ODP	eq. kg CFC 11	1.24E-08	1.00E-08	1.31E-09	2.38E-08	3.79E-10	7.10E-10	2.51E-09	2.44E-11	-4.45E-09
AP	mol H+	3.36E-02	1.01E-03	9.97E-04	3.56E-02	2.21E-04	7.74E-05	1.77E-03	4.55E-06	-2.49E-02
EP-freshwater	eq. kg P	3.31E-03	3.28E-05	1.59E-04	3.50E-03	7.32E-07	2.31E-06	9.32E-05	3.29E-08	-1.79E-04
EP-marine	eq. kg N	6.92E-03	2.55E-04	1.49E-04	7.32E-03	1.02E-04	2.11E-05	4.14E-04	1.98E-06	-3.18E-04
EP-terrestrial	eq. mol N	9.90E-02	2.59E-03	1.27E-03	1.03E-01	1.11E-03	2.16E-04	4.62E-03	2.13E-05	-3.34E-03
POCP	eq. kg NMVOC	8.69E-03	1.57E-03	4.11E-04	1.07E-02	3.30E-04	1.26E-04	1.38E-03	8.44E-06	-4.12E-03
ADP-minerals & metals	eq. kg Sb.	1.12E-03	1.54E-06	5.40E-07	1.12E-03	8.53E-09	8.96E-08	9.77E-06	7.58E-10	1.27E-06
ADP-fossil	MJ	1.62E+02	6.60E+00	1.88E+00	1.70E+02	3.14E-01	4.78E-01	2.17E+00	1.81E-02	-8.12E+01
WDP	eq. m3	3.20E-01	3.28E-02	2.92E-02	3.82E-01	7.77E-04	2.46E-03	3.59E-02	6.21E-05	-5.50E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	5.84E-08	3.44E-08	2.33E-09	9.51E-08	6.16E-09	3.10E-09	2.45E-08	1.15E-10	-1.88E-07
IRP	eq. kBq U235	3.17E-02	8.87E-03	4.49E-03	4.50E-02	1.48E-04	5.99E-04	1.71E-02	1.71E-05	2.88E-01
ETP-fw	CTUe	3.75E+00	3.24E+00	6.37E-01	7.63E+00	1.49E-01	2.28E-01	1.68E+00	7.57E-03	1.44E+00
HTTP-c	CTUh	5.29E-09	2.11E-10	6.43E-11	5.56E-09	7.31E-12	1.40E-11	2.43E-10	2.40E-13	5.06E-08
HTTP-nc	CTUh	1.47E-08	4.69E-09	2.64E-09	2.21E-08	5.13E-11	3.42E-10	1.09E-08	3.18E-12	1.10E-08
SQP	dimensionless	2.24E+00	3.96E+00	3.78E-01	6.58E+00	2.09E-02	4.82E-01	3.81E+00	3.70E-02	-3.59E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.19E+01	1.03E-01	1.44E-01	1.22E+01	1.78E-03	6.94E-03	3.33E-01	3.56E-04	7.38E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.19E+01	1.03E-01	1.44E-01	1.22E+01	1.78E-03	6.94E-03	3.33E-01	3.56E-04	7.38E+00
PEN-RE	MJ	1.68E+02	6.03E+00	1.83E+00	1.76E+02	2.86E-01	4.37E-01	2.04E+00	1.64E-02	-7.66E+01
PENRM	MJ	1.76E-01	5.72E-01	4.62E-02	7.95E-01	2.87E-02	4.15E-02	1.27E-01	1.65E-03	-8.49E-03
PENRT	MJ	1.68E+02	6.60E+00	1.88E+00	1.76E+02	3.14E-01	4.78E-01	2.17E+00	1.81E-02	-7.66E+01
SM	MJ	5.39E-01	7.24E-03	7.89E-03	5.55E-01	1.82E-04	4.78E-04	6.12E+00	1.43E-05	5.43E+00
RSF	MJ	5.92E-03	1.95E-03	4.62E-03	1.25E-02	2.00E-05	1.17E-04	4.35E-03	5.54E-06	3.97E-03
NRSF	MJ	2.43E-02	3.84E-03	1.60E-02	4.42E-02	5.41E-05	2.42E-04	5.00E-03	4.27E-06	3.53E-03
FW	m3	4.13E-02	7.97E-04	3.86E-03	4.59E-02	1.68E-05	6.38E-05	1.01E-03	2.06E-05	3.53E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	2.31E-01	6.20E-03	4.77E-03	2.42E-01	2.61E-04	4.48E-04	9.32E-03	9.21E-06	2.66E-02
NHWD	kg	1.57E-01	3.20E-01	9.67E-02	5.74E-01	1.94E-04	4.12E-02	5.57E-02	1.25E-01	-1.62E-01
RWD	kg	2.63E-03	2.16E-06	1.10E-06	2.63E-03	3.42E-08	1.45E-07	4.34E-06	3.88E-09	1.80E-03
CRU	kg	4.00E-22	-2.52E-22	1.09E-22	2.56E-22	-2.40E-24	-9.08E-24	6.02E-23	-1.92E-24	-3.38E-22
MFR	kg	9.09E-02	6.56E-03	8.18E-03	1.06E-01	1.49E-04	4.12E-04	9.06E-03	1.28E-05	-3.65E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.6: LCA analysis results for profiled steel elements with thickness 0.70 mm

Results per 1 m ² : profiled steel elements 0.70 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	1.87E+01	5.13E-01	1.44E-01	1.94E+01	2.38E-02	3.48E-02	1.73E-01	7.86E-04	-1.14E+01
GWP-fossil	eq. kg CO2	1.87E+01	5.13E-01	1.40E-01	1.93E+01	2.38E-02	3.47E-02	1.76E-01	7.83E-04	-1.12E+01
GWP-biogenic	eq. kg CO2	4.87E-02	4.54E-04	3.84E-03	5.30E-02	5.16E-06	2.66E-05	-3.11E-03	2.37E-06	-1.54E-01
GWP-luluc	eq. kg CO2	1.23E+00	2.53E-04	4.21E-05	1.23E+00	2.68E-06	1.69E-05	2.58E-04	1.54E-07	-1.40E-02
ODP	eq. kg CFC 11	1.38E-08	1.12E-08	1.31E-09	2.63E-08	3.79E-10	7.89E-10	2.79E-09	2.71E-11	-4.94E-09
AP	mol H+	3.73E-02	1.12E-03	9.97E-04	3.94E-02	2.21E-04	8.60E-05	1.97E-03	5.06E-06	-2.76E-02
EP-freshwater	eq. kg P	3.68E-03	3.64E-05	1.59E-04	3.87E-03	7.32E-07	2.56E-06	1.04E-04	3.66E-08	-1.99E-04
EP-marine	eq. kg N	7.69E-03	2.83E-04	1.49E-04	8.12E-03	1.02E-04	2.34E-05	4.60E-04	2.21E-06	-3.53E-04
EP-terrestrial	eq. mol N	1.10E-01	2.87E-03	1.27E-03	1.14E-01	1.11E-03	2.41E-04	5.13E-03	2.36E-05	-3.71E-03
POCP	eq. kg NMVOC	9.65E-03	1.74E-03	4.11E-04	1.18E-02	3.30E-04	1.40E-04	1.54E-03	9.38E-06	-4.57E-03
ADP-minerals & metals	eq. kg Sb.	1.25E-03	1.72E-06	5.40E-07	1.25E-03	8.53E-09	9.95E-08	1.09E-05	8.42E-10	1.41E-06
ADP-fossil	MJ	1.79E+02	7.34E+00	1.88E+00	1.89E+02	3.14E-01	5.31E-01	2.41E+00	2.01E-02	-9.02E+01
WDP	eq. m3	3.56E-01	3.64E-02	2.92E-02	4.21E-01	7.77E-04	2.73E-03	3.99E-02	6.90E-05	-6.11E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	6.48E-08	3.82E-08	2.33E-09	1.05E-07	6.16E-09	3.44E-09	2.72E-08	1.28E-10	-2.08E-07
IRP	eq. kBq U235	3.52E-02	9.86E-03	4.49E-03	4.95E-02	1.48E-04	6.65E-04	1.90E-02	1.90E-05	3.20E-01
ETP-fw	CTUe	4.16E+00	3.60E+00	6.37E-01	8.40E+00	1.49E-01	2.54E-01	1.87E+00	8.41E-03	1.60E+00
HTTP-c	CTUh	5.88E-09	2.35E-10	6.43E-11	6.17E-09	7.31E-12	1.55E-11	2.70E-10	2.66E-13	5.62E-08
HTTP-nc	CTUh	1.64E-08	5.21E-09	2.64E-09	2.42E-08	5.13E-11	3.80E-10	1.21E-08	3.53E-12	1.22E-08
SQP	dimensionless	2.49E+00	4.40E+00	3.78E-01	7.27E+00	2.09E-02	5.35E-01	4.23E+00	4.11E-02	-3.99E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.33E+01	1.14E-01	1.44E-01	1.35E+01	1.78E-03	7.71E-03	3.70E-01	3.96E-04	8.20E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.33E+01	1.14E-01	1.44E-01	1.35E+01	1.78E-03	7.71E-03	3.70E-01	3.96E-04	8.20E+00
PEN-RE	MJ	1.86E+02	6.70E+00	1.83E+00	1.95E+02	2.86E-01	4.85E-01	2.27E+00	1.82E-02	-8.51E+01
PENRM	MJ	1.96E-01	6.36E-01	4.62E-02	8.78E-01	2.87E-02	4.61E-02	1.41E-01	1.83E-03	-9.44E-03
PENRT	MJ	1.87E+02	7.34E+00	1.88E+00	1.96E+02	3.14E-01	5.31E-01	2.41E+00	2.01E-02	-8.51E+01
SM	MJ	5.99E-01	8.05E-03	7.89E-03	6.15E-01	1.82E-04	5.32E-04	6.80E+00	1.59E-05	6.03E+00
RSF	MJ	6.58E-03	2.17E-03	4.62E-03	1.34E-02	2.00E-05	1.30E-04	4.84E-03	6.16E-06	4.41E-03
NRSF	MJ	2.70E-02	4.27E-03	1.60E-02	4.73E-02	5.41E-05	2.69E-04	5.56E-03	4.74E-06	3.93E-03
FW	m3	4.59E-02	8.86E-04	3.86E-03	5.06E-02	1.68E-05	7.09E-05	1.13E-03	2.28E-05	3.92E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	2.57E-01	6.88E-03	4.77E-03	2.68E-01	2.61E-04	4.98E-04	1.04E-02	1.02E-05	2.95E-02
NHWD	kg	1.75E-01	3.55E-01	9.67E-02	6.27E-01	1.94E-04	4.57E-02	6.18E-02	1.38E-01	-1.80E-01
RWD	kg	2.92E-03	2.39E-06	1.10E-06	2.93E-03	3.42E-08	1.61E-07	4.83E-06	4.31E-09	2.00E-03
CRU	kg	4.44E-22	-2.80E-22	1.09E-22	2.73E-22	-2.40E-24	-1.01E-23	6.69E-23	-2.14E-24	-3.76E-22
MFR	kg	1.01E-01	7.29E-03	8.18E-03	1.16E-01	1.49E-04	4.58E-04	1.01E-02	1.42E-05	-4.06E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.7: LCA analysis results for profiled steel elements with thickness 0.75 mm

Results per 1 m ² : profiled steel elements 0.75 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	2.01E+01	5.50E-01	1.44E-01	2.07E+01	2.38E-02	3.73E-02	1.85E-01	8.42E-04	-1.22E+01
GWP-fossil	eq. kg CO2	2.00E+01	5.49E-01	1.40E-01	2.07E+01	2.38E-02	3.72E-02	1.88E-01	8.39E-04	-1.20E+01
GWP-biogenic	eq. kg CO2	5.22E-02	4.87E-04	3.84E-03	5.65E-02	5.16E-06	2.85E-05	-3.33E-03	2.54E-06	-1.65E-01
GWP-luluc	eq. kg CO2	1.32E+00	2.71E-04	4.21E-05	1.32E+00	2.68E-06	1.82E-05	2.76E-04	1.65E-07	-1.50E-02
ODP	eq. kg CFC 11	1.48E-08	1.20E-08	1.31E-09	2.81E-08	3.79E-10	8.45E-10	2.99E-09	2.91E-11	-5.29E-09
AP	mol H+	4.00E-02	1.20E-03	9.97E-04	4.22E-02	2.21E-04	9.21E-05	2.11E-03	5.42E-06	-2.96E-02
EP-freshwater	eq. kg P	3.94E-03	3.90E-05	1.59E-04	4.14E-03	7.32E-07	2.75E-06	1.11E-04	3.92E-08	-2.14E-04
EP-marine	eq. kg N	8.23E-03	3.03E-04	1.49E-04	8.69E-03	1.02E-04	2.51E-05	4.93E-04	2.36E-06	-3.79E-04
EP-terrestrial	eq. mol N	1.18E-01	3.08E-03	1.27E-03	1.22E-01	1.11E-03	2.58E-04	5.49E-03	2.53E-05	-3.98E-03
POCP	eq. kg NMVOC	1.03E-02	1.86E-03	4.11E-04	1.26E-02	3.30E-04	1.50E-04	1.64E-03	1.01E-05	-4.90E-03
ADP-minerals & metals	eq. kg Sb.	1.33E-03	1.84E-06	5.40E-07	1.34E-03	8.53E-09	1.07E-07	1.16E-05	9.02E-10	1.51E-06
ADP-fossil	MJ	1.92E+02	7.86E+00	1.88E+00	2.02E+02	3.14E-01	5.69E-01	2.58E+00	2.15E-02	-9.67E+01
WDP	eq. m3	3.81E-01	3.90E-02	2.92E-02	4.49E-01	7.77E-04	2.92E-03	4.27E-02	7.39E-05	-6.55E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	6.95E-08	4.09E-08	2.33E-09	1.13E-07	6.16E-09	3.69E-09	2.92E-08	1.37E-10	-2.23E-07
IRP	eq. kBq U235	3.77E-02	1.06E-02	4.49E-03	5.28E-02	1.48E-04	7.13E-04	2.03E-02	2.03E-05	3.43E-01
ETP-fw	CTUe	4.46E+00	3.86E+00	6.37E-01	8.96E+00	1.49E-01	2.72E-01	2.00E+00	9.01E-03	1.72E+00
HTTP-c	CTUh	6.30E-09	2.51E-10	6.43E-11	6.61E-09	7.31E-12	1.66E-11	2.89E-10	2.85E-13	6.02E-08
HTTP-nc	CTUh	1.75E-08	5.58E-09	2.64E-09	2.58E-08	5.13E-11	4.07E-10	1.30E-08	3.78E-12	1.31E-08
SQP	dimensionless	2.67E+00	4.72E+00	3.78E-01	7.76E+00	2.09E-02	5.73E-01	4.53E+00	4.40E-02	-4.27E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.42E+01	1.23E-01	1.44E-01	1.45E+01	1.78E-03	8.26E-03	3.96E-01	4.24E-04	8.78E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.42E+01	1.23E-01	1.44E-01	1.45E+01	1.78E-03	8.26E-03	3.96E-01	4.24E-04	8.78E+00
PEN-RE	MJ	2.00E+02	7.18E+00	1.83E+00	2.09E+02	2.86E-01	5.20E-01	2.43E+00	1.95E-02	-9.12E+01
PENRM	MJ	2.10E-01	6.81E-01	4.62E-02	9.37E-01	2.87E-02	4.94E-02	1.51E-01	1.97E-03	-1.01E-02
PENRT	MJ	2.00E+02	7.86E+00	1.88E+00	2.10E+02	3.14E-01	5.69E-01	2.58E+00	2.15E-02	-9.12E+01
SM	MJ	6.42E-01	8.62E-03	7.89E-03	6.59E-01	1.82E-04	5.70E-04	7.28E+00	1.70E-05	6.46E+00
RSF	MJ	7.05E-03	2.32E-03	4.62E-03	1.40E-02	2.00E-05	1.39E-04	5.18E-03	6.60E-06	4.72E-03
NRSF	MJ	2.89E-02	4.57E-03	1.60E-02	4.96E-02	5.41E-05	2.88E-04	5.95E-03	5.08E-06	4.21E-03
FW	m3	4.91E-02	9.49E-04	3.86E-03	5.39E-02	1.68E-05	7.60E-05	1.21E-03	2.45E-05	4.20E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	2.75E-01	7.38E-03	4.77E-03	2.87E-01	2.61E-04	5.34E-04	1.11E-02	1.10E-05	3.16E-02
NHWD	kg	1.87E-01	3.81E-01	9.67E-02	6.65E-01	1.94E-04	4.90E-02	6.63E-02	1.48E-01	-1.93E-01
RWD	kg	3.13E-03	2.57E-06	1.10E-06	3.13E-03	3.42E-08	1.72E-07	5.17E-06	4.62E-09	2.15E-03
CRU	kg	4.76E-22	-3.00E-22	1.09E-22	2.84E-22	-2.40E-24	-1.08E-23	7.16E-23	-2.29E-24	-4.02E-22
MFR	kg	1.08E-01	7.81E-03	8.18E-03	1.24E-01	1.49E-04	4.90E-04	1.08E-02	1.52E-05	-4.35E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.8: LCA analysis results for profiled steel elements with thickness 0.80 mm

Results per 1 m ² : profiled steel elements 0.80 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	2.14E+01	5.87E-01	1.44E-01	2.21E+01	2.38E-02	3.98E-02	1.98E-01	8.98E-04	-1.30E+01
GWP-fossil	eq. kg CO2	2.13E+01	5.86E-01	1.40E-01	2.20E+01	2.38E-02	3.97E-02	2.01E-01	8.95E-04	-1.28E+01
GWP-biogenic	eq. kg CO2	5.57E-02	5.19E-04	3.84E-03	6.00E-02	5.16E-06	3.04E-05	-3.55E-03	2.71E-06	-1.76E-01
GWP-luluc	eq. kg CO2	1.41E+00	2.89E-04	4.21E-05	1.41E+00	2.68E-06	1.94E-05	2.94E-04	1.76E-07	-1.60E-02
ODP	eq. kg CFC 11	1.58E-08	1.28E-08	1.31E-09	2.98E-08	3.79E-10	9.01E-10	3.19E-09	3.10E-11	-5.65E-09
AP	mol H+	4.26E-02	1.28E-03	9.97E-04	4.49E-02	2.21E-04	9.83E-05	2.25E-03	5.78E-06	-3.16E-02
EP-freshwater	eq. kg P	4.20E-03	4.17E-05	1.59E-04	4.40E-03	7.32E-07	2.93E-06	1.18E-04	4.18E-08	-2.28E-04
EP-marine	eq. kg N	8.78E-03	3.23E-04	1.49E-04	9.26E-03	1.02E-04	2.68E-05	5.26E-04	2.52E-06	-4.04E-04
EP-terrestrial	eq. mol N	1.26E-01	3.28E-03	1.27E-03	1.30E-01	1.11E-03	2.75E-04	5.86E-03	2.70E-05	-4.24E-03
POCP	eq. kg NMVOC	1.10E-02	1.99E-03	4.11E-04	1.34E-02	3.30E-04	1.60E-04	1.75E-03	1.07E-05	-5.23E-03
ADP-minerals & metals	eq. kg Sb.	1.42E-03	1.96E-06	5.40E-07	1.43E-03	8.53E-09	1.14E-07	1.24E-05	9.63E-10	1.61E-06
ADP-fossil	MJ	2.05E+02	8.39E+00	1.88E+00	2.15E+02	3.14E-01	6.07E-01	2.75E+00	2.29E-02	-1.03E+02
WDP	eq. m3	4.06E-01	4.16E-02	2.92E-02	4.77E-01	7.77E-04	3.12E-03	4.56E-02	7.88E-05	-6.98E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	7.41E-08	4.37E-08	2.33E-09	1.20E-07	6.16E-09	3.93E-09	3.11E-08	1.46E-10	-2.38E-07
IRP	eq. kBq U235	4.02E-02	1.13E-02	4.49E-03	5.60E-02	1.48E-04	7.60E-04	2.17E-02	2.17E-05	3.66E-01
ETP-fw	CTUe	4.76E+00	4.12E+00	6.37E-01	9.51E+00	1.49E-01	2.90E-01	2.14E+00	9.61E-03	1.83E+00
HTTP-c	CTUh	6.72E-09	2.68E-10	6.43E-11	7.05E-09	7.31E-12	1.77E-11	3.08E-10	3.04E-13	6.43E-08
HTTP-nc	CTUh	1.87E-08	5.95E-09	2.64E-09	2.73E-08	5.13E-11	4.34E-10	1.39E-08	4.03E-12	1.40E-08
SQP	dimensionless	2.85E+00	5.03E+00	3.78E-01	8.25E+00	2.09E-02	6.12E-01	4.83E+00	4.70E-02	-4.56E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.52E+01	1.31E-01	1.44E-01	1.54E+01	1.78E-03	8.82E-03	4.22E-01	4.52E-04	9.37E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.52E+01	1.31E-01	1.44E-01	1.54E+01	1.78E-03	8.82E-03	4.22E-01	4.52E-04	9.37E+00
PEN-RE	MJ	2.13E+02	7.66E+00	1.83E+00	2.22E+02	2.86E-01	5.54E-01	2.59E+00	2.08E-02	-9.73E+01
PENRM	MJ	2.24E-01	7.27E-01	4.62E-02	9.97E-01	2.87E-02	5.27E-02	1.61E-01	2.10E-03	-1.08E-02
PENRT	MJ	2.13E+02	8.39E+00	1.88E+00	2.23E+02	3.14E-01	6.07E-01	2.75E+00	2.29E-02	-9.73E+01
SM	MJ	6.85E-01	9.20E-03	7.89E-03	7.02E-01	1.82E-04	6.08E-04	7.77E+00	1.81E-05	6.89E+00
RSF	MJ	7.52E-03	2.48E-03	4.62E-03	1.46E-02	2.00E-05	1.48E-04	5.53E-03	7.04E-06	5.04E-03
NRSF	MJ	3.09E-02	4.87E-03	1.60E-02	5.18E-02	5.41E-05	3.07E-04	6.35E-03	5.42E-06	4.49E-03
FW	m3	5.24E-02	1.01E-03	3.86E-03	5.73E-02	1.68E-05	8.10E-05	1.29E-03	2.61E-05	4.48E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	2.93E-01	7.87E-03	4.77E-03	3.06E-01	2.61E-04	5.69E-04	1.18E-02	1.17E-05	3.37E-02
NHWD	kg	2.00E-01	4.06E-01	9.67E-02	7.03E-01	1.94E-04	5.23E-02	7.07E-02	1.58E-01	-2.06E-01
RWD	kg	3.34E-03	2.74E-06	1.10E-06	3.34E-03	3.42E-08	1.84E-07	5.52E-06	4.93E-09	2.29E-03
CRU	kg	5.07E-22	-3.20E-22	1.09E-22	2.96E-22	-2.40E-24	-1.15E-23	7.64E-23	-2.44E-24	-4.29E-22
MFR	kg	1.15E-01	8.33E-03	8.18E-03	1.32E-01	1.49E-04	5.23E-04	1.15E-02	1.62E-05	-4.64E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.9: LCA analysis results for profiled steel elements with thickness 0.88 mm

Results per 1 m ² : profiled steel elements 0.88 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	2.35E+01	6.46E-01	1.44E-01	2.43E+01	2.38E-02	4.37E-02	2.17E-01	9.88E-04	-1.43E+01
GWP-fossil	eq. kg CO2	2.34E+01	6.45E-01	1.40E-01	2.42E+01	2.38E-02	4.37E-02	2.21E-01	9.85E-04	-1.41E+01
GWP-biogenic	eq. kg CO2	6.12E-02	5.71E-04	3.84E-03	6.56E-02	5.16E-06	3.35E-05	-3.91E-03	2.98E-06	-1.94E-01
GWP-luluc	eq. kg CO2	1.55E+00	3.18E-04	4.21E-05	1.55E+00	2.68E-06	2.13E-05	3.24E-04	1.94E-07	-1.76E-02
ODP	eq. kg CFC 11	1.73E-08	1.40E-08	1.31E-09	3.27E-08	3.79E-10	9.91E-10	3.51E-09	3.41E-11	-6.21E-09
AP	mol H+	4.69E-02	1.41E-03	9.97E-04	4.93E-02	2.21E-04	1.08E-04	2.48E-03	6.36E-06	-3.48E-02
EP-freshwater	eq. kg P	4.62E-03	4.58E-05	1.59E-04	4.83E-03	7.32E-07	3.22E-06	1.30E-04	4.60E-08	-2.51E-04
EP-marine	eq. kg N	9.66E-03	3.55E-04	1.49E-04	1.02E-02	1.02E-04	2.95E-05	5.78E-04	2.77E-06	-4.44E-04
EP-terrestrial	eq. mol N	1.38E-01	3.61E-03	1.27E-03	1.43E-01	1.11E-03	3.02E-04	6.45E-03	2.97E-05	-4.66E-03
POCP	eq. kg NMVOC	1.21E-02	2.19E-03	4.11E-04	1.47E-02	3.30E-04	1.77E-04	1.93E-03	1.18E-05	-5.75E-03
ADP-minerals & metals	eq. kg Sb.	1.57E-03	2.16E-06	5.40E-07	1.57E-03	8.53E-09	1.25E-07	1.36E-05	1.06E-09	1.78E-06
ADP-fossil	MJ	2.26E+02	9.22E+00	1.88E+00	2.37E+02	3.14E-01	6.68E-01	3.03E+00	2.52E-02	-1.13E+02
WDP	eq. m3	4.47E-01	4.58E-02	2.92E-02	5.22E-01	7.77E-04	3.43E-03	5.01E-02	8.67E-05	-7.68E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	8.15E-08	4.80E-08	2.33E-09	1.32E-07	6.16E-09	4.32E-09	3.42E-08	1.60E-10	-2.62E-07
IRP	eq. kBq U235	4.43E-02	1.24E-02	4.49E-03	6.11E-02	1.48E-04	8.36E-04	2.38E-02	2.38E-05	4.02E-01
ETP-fw	CTUe	5.24E+00	4.53E+00	6.37E-01	1.04E+01	1.49E-01	3.19E-01	2.35E+00	1.06E-02	2.01E+00
HTTP-c	CTUh	7.39E-09	2.95E-10	6.43E-11	7.75E-09	7.31E-12	1.95E-11	3.39E-10	3.35E-13	7.07E-08
HTTP-nc	CTUh	2.06E-08	6.55E-09	2.64E-09	2.98E-08	5.13E-11	4.77E-10	1.53E-08	4.44E-12	1.54E-08
SQP	dimensionless	3.13E+00	5.53E+00	3.78E-01	9.04E+00	2.09E-02	6.73E-01	5.32E+00	5.17E-02	-5.01E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.67E+01	1.44E-01	1.44E-01	1.70E+01	1.78E-03	9.70E-03	4.65E-01	4.97E-04	1.03E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.67E+01	1.44E-01	1.44E-01	1.70E+01	1.78E-03	9.70E-03	4.65E-01	4.97E-04	1.03E+01
PEN-RE	MJ	2.34E+02	8.42E+00	1.83E+00	2.44E+02	2.86E-01	6.10E-01	2.85E+00	2.29E-02	-1.07E+02
PENRM	MJ	2.46E-01	7.99E-01	4.62E-02	1.09E+00	2.87E-02	5.79E-02	1.77E-01	2.31E-03	-1.19E-02
PENRT	MJ	2.34E+02	9.22E+00	1.88E+00	2.46E+02	3.14E-01	6.68E-01	3.03E+00	2.52E-02	-1.07E+02
SM	MJ	7.54E-01	1.01E-02	7.89E-03	7.72E-01	1.82E-04	6.68E-04	8.54E+00	2.00E-05	7.58E+00
RSF	MJ	8.27E-03	2.73E-03	4.62E-03	1.56E-02	2.00E-05	1.63E-04	6.08E-03	7.74E-06	5.54E-03
NRSF	MJ	3.40E-02	5.36E-03	1.60E-02	5.54E-02	5.41E-05	3.38E-04	6.98E-03	5.96E-06	4.94E-03
FW	m3	5.76E-02	1.11E-03	3.86E-03	6.26E-02	1.68E-05	8.91E-05	1.42E-03	2.87E-05	4.93E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	3.23E-01	8.65E-03	4.77E-03	3.36E-01	2.61E-04	6.26E-04	1.30E-02	1.29E-05	3.71E-02
NHWD	kg	2.20E-01	4.47E-01	9.67E-02	7.63E-01	1.94E-04	5.75E-02	7.78E-02	1.74E-01	-2.27E-01
RWD	kg	3.67E-03	3.01E-06	1.10E-06	3.68E-03	3.42E-08	2.02E-07	6.07E-06	5.42E-09	2.52E-03
CRU	kg	5.58E-22	-3.52E-22	1.09E-22	3.15E-22	-2.40E-24	-1.27E-23	8.41E-23	-2.69E-24	-4.72E-22
MFR	kg	1.27E-01	9.16E-03	8.18E-03	1.44E-01	1.49E-04	5.76E-04	1.27E-02	1.78E-05	-5.10E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.10: LCA analysis results for profiled steel elements with thickness 0.90 mm

Results per 1 m ² : profiled steel elements 0.90 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	2.41E+01	6.60E-01	1.44E-01	2.49E+01	2.38E-02	4.47E-02	2.22E-01	1.01E-03	-1.46E+01
GWP-fossil	eq. kg CO2	2.40E+01	6.59E-01	1.40E-01	2.48E+01	2.38E-02	4.47E-02	2.26E-01	1.01E-03	-1.44E+01
GWP-biogenic	eq. kg CO2	6.26E-02	5.84E-04	3.84E-03	6.70E-02	5.16E-06	3.42E-05	-4.00E-03	3.05E-06	-1.98E-01
GWP-luluc	eq. kg CO2	1.59E+00	3.25E-04	4.21E-05	1.59E+00	2.68E-06	2.18E-05	3.31E-04	1.98E-07	-1.80E-02
ODP	eq. kg CFC 11	1.77E-08	1.44E-08	1.31E-09	3.34E-08	3.79E-10	1.01E-09	3.59E-09	3.49E-11	-6.35E-09
AP	mol H+	4.80E-02	1.44E-03	9.97E-04	5.04E-02	2.21E-04	1.11E-04	2.53E-03	6.50E-06	-3.55E-02
EP-freshwater	eq. kg P	4.73E-03	4.69E-05	1.59E-04	4.93E-03	7.32E-07	3.30E-06	1.33E-04	4.70E-08	-2.56E-04
EP-marine	eq. kg N	9.88E-03	3.64E-04	1.49E-04	1.04E-02	1.02E-04	3.01E-05	5.91E-04	2.84E-06	-4.54E-04
EP-terrestrial	eq. mol N	1.41E-01	3.69E-03	1.27E-03	1.46E-01	1.11E-03	3.09E-04	6.59E-03	3.04E-05	-4.77E-03
POCP	eq. kg NMVOC	1.24E-02	2.24E-03	4.11E-04	1.51E-02	3.30E-04	1.81E-04	1.97E-03	1.21E-05	-5.88E-03
ADP-minerals & metals	eq. kg Sb.	1.60E-03	2.21E-06	5.40E-07	1.60E-03	8.53E-09	1.28E-07	1.40E-05	1.08E-09	1.82E-06
ADP-fossil	MJ	2.31E+02	9.43E+00	1.88E+00	2.42E+02	3.14E-01	6.83E-01	3.10E+00	2.58E-02	-1.16E+02
WDP	eq. m3	4.57E-01	4.68E-02	2.92E-02	5.33E-01	7.77E-04	3.51E-03	5.13E-02	8.87E-05	-7.86E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	8.34E-08	4.91E-08	2.33E-09	1.35E-07	6.16E-09	4.42E-09	3.50E-08	1.64E-10	-2.68E-07
IRP	eq. kBq U235	4.53E-02	1.27E-02	4.49E-03	6.24E-02	1.48E-04	8.55E-04	2.44E-02	2.44E-05	4.12E-01
ETP-fw	CTUe	5.35E+00	4.63E+00	6.37E-01	1.06E+01	1.49E-01	3.26E-01	2.40E+00	1.08E-02	2.06E+00
HTTP-c	CTUh	7.55E-09	3.02E-10	6.43E-11	7.92E-09	7.31E-12	1.99E-11	3.47E-10	3.43E-13	7.23E-08
HTTP-nc	CTUh	2.10E-08	6.70E-09	2.64E-09	3.04E-08	5.13E-11	4.88E-10	1.56E-08	4.54E-12	1.57E-08
SQP	dimensionless	3.20E+00	5.66E+00	3.78E-01	9.24E+00	2.09E-02	6.88E-01	5.44E+00	5.29E-02	-5.13E+00



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.71E+01	1.47E-01	1.44E-01	1.73E+01	1.78E-03	9.92E-03	4.75E-01	5.09E-04	1.05E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.71E+01	1.47E-01	1.44E-01	1.73E+01	1.78E-03	9.92E-03	4.75E-01	5.09E-04	1.05E+01
PEN-RE	MJ	2.40E+02	8.62E+00	1.83E+00	2.50E+02	2.86E-01	6.24E-01	2.92E+00	2.34E-02	-1.09E+02
PENRM	MJ	2.52E-01	8.17E-01	4.62E-02	1.12E+00	2.87E-02	5.93E-02	1.82E-01	2.36E-03	-1.21E-02
PENRT	MJ	2.40E+02	9.43E+00	1.88E+00	2.51E+02	3.14E-01	6.83E-01	3.10E+00	2.58E-02	-1.09E+02
SM	MJ	7.71E-01	1.03E-02	7.89E-03	7.89E-01	1.82E-04	6.84E-04	8.74E+00	2.04E-05	7.76E+00
RSF	MJ	8.46E-03	2.79E-03	4.62E-03	1.59E-02	2.00E-05	1.67E-04	6.22E-03	7.92E-06	5.66E-03
NRSF	MJ	3.47E-02	5.48E-03	1.60E-02	5.63E-02	5.41E-05	3.46E-04	7.14E-03	6.10E-06	5.05E-03
FW	m3	5.90E-02	1.14E-03	3.86E-03	6.40E-02	1.68E-05	9.11E-05	1.45E-03	2.94E-05	5.04E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	3.30E-01	8.85E-03	4.77E-03	3.44E-01	2.61E-04	6.40E-04	1.33E-02	1.32E-05	3.80E-02
NHWD	kg	2.25E-01	4.57E-01	9.67E-02	7.78E-01	1.94E-04	5.88E-02	7.95E-02	1.78E-01	-2.32E-01
RWD	kg	3.76E-03	3.08E-06	1.10E-06	3.76E-03	3.42E-08	2.07E-07	6.21E-06	5.54E-09	2.58E-03
CRU	kg	5.71E-22	-3.60E-22	1.09E-22	3.19E-22	-2.40E-24	-1.30E-23	8.60E-23	-2.75E-24	-4.83E-22
MFR	kg	1.30E-01	9.37E-03	8.18E-03	1.47E-01	1.49E-04	5.89E-04	1.29E-02	1.82E-05	-5.22E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.11: LCA analysis results for profiled steel elements with thickness 1.00 mm

Results per 1 m ² : profiled steel elements 1.00 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	2.67E+01	7.34E-01	1.44E-01	2.76E+01	2.38E-02	4.97E-02	2.47E-01	1.12E-03	-1.62E+01
GWP-fossil	eq. kg CO2	2.66E+01	7.33E-01	1.40E-01	2.75E+01	2.38E-02	4.96E-02	2.51E-01	1.12E-03	-1.60E+01
GWP-biogenic	eq. kg CO2	6.96E-02	6.49E-04	3.84E-03	7.41E-02	5.16E-06	3.80E-05	-4.44E-03	3.39E-06	-2.20E-01
GWP-luluc	eq. kg CO2	1.76E+00	3.62E-04	4.21E-05	1.76E+00	2.68E-06	2.42E-05	3.68E-04	2.20E-07	-2.00E-02
ODP	eq. kg CFC 11	1.97E-08	1.59E-08	1.31E-09	3.70E-08	3.79E-10	1.13E-09	3.99E-09	3.88E-11	-7.06E-09
AP	mol H+	5.33E-02	1.60E-03	9.97E-04	5.59E-02	2.21E-04	1.23E-04	2.81E-03	7.22E-06	-3.95E-02
EP-freshwater	eq. kg P	5.25E-03	5.21E-05	1.59E-04	5.46E-03	7.32E-07	3.66E-06	1.48E-04	5.22E-08	-2.85E-04
EP-marine	eq. kg N	1.10E-02	4.04E-04	1.49E-04	1.15E-02	1.02E-04	3.35E-05	6.57E-04	3.15E-06	-5.05E-04
EP-terrestrial	eq. mol N	1.57E-01	4.10E-03	1.27E-03	1.63E-01	1.11E-03	3.44E-04	7.33E-03	3.38E-05	-5.30E-03
POCP	eq. kg NMVOC	1.38E-02	2.49E-03	4.11E-04	1.67E-02	3.30E-04	2.01E-04	2.19E-03	1.34E-05	-6.53E-03
ADP-minerals & metals	eq. kg Sb.	1.78E-03	2.45E-06	5.40E-07	1.78E-03	8.53E-09	1.42E-07	1.55E-05	1.20E-09	2.02E-06
ADP-fossil	MJ	2.56E+02	1.05E+01	1.88E+00	2.69E+02	3.14E-01	7.59E-01	3.44E+00	2.87E-02	-1.29E+02
WDP	eq. m3	5.08E-01	5.20E-02	2.92E-02	5.89E-01	7.77E-04	3.90E-03	5.70E-02	9.85E-05	-8.73E-01
ADDITIONAL IMPACTS										
PM	Disease incidence	9.26E-08	5.46E-08	2.33E-09	1.50E-07	6.16E-09	4.91E-09	3.89E-08	1.82E-10	-2.98E-07
IRP	eq. kBq U235	5.03E-02	1.41E-02	4.49E-03	6.89E-02	1.48E-04	9.50E-04	2.71E-02	2.71E-05	4.57E-01
ETP-fw	CTUe	5.95E+00	5.14E+00	6.37E-01	1.17E+01	1.49E-01	3.62E-01	2.67E+00	1.20E-02	2.29E+00
HTTP-c	CTUh	8.39E-09	3.35E-10	6.43E-11	8.79E-09	7.31E-12	2.22E-11	3.85E-10	3.81E-13	8.03E-08
HTTP-nc	CTUh	2.34E-08	7.44E-09	2.64E-09	3.35E-08	5.13E-11	5.42E-10	1.73E-08	5.04E-12	1.75E-08
SQP	dimensionless	3.56E+00	6.29E+00	3.78E-01	1.02E+01	2.09E-02	7.64E-01	6.04E+00	5.87E-02	-5.70E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.90E+01	1.64E-01	1.44E-01	1.93E+01	1.78E-03	1.10E-02	5.28E-01	5.65E-04	1.17E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.90E+01	1.64E-01	1.44E-01	1.93E+01	1.78E-03	1.10E-02	5.28E-01	5.65E-04	1.17E+01
PEN-RE	MJ	2.66E+02	9.57E+00	1.83E+00	2.78E+02	2.86E-01	6.93E-01	3.24E+00	2.60E-02	-1.22E+02
PENRM	MJ	2.80E-01	9.08E-01	4.62E-02	1.23E+00	2.87E-02	6.58E-02	2.02E-01	2.62E-03	-1.35E-02
PENRT	MJ	2.66E+02	1.05E+01	1.88E+00	2.79E+02	3.14E-01	7.59E-01	3.44E+00	2.87E-02	-1.22E+02
SM	MJ	8.56E-01	1.15E-02	7.89E-03	8.76E-01	1.82E-04	7.59E-04	9.71E+00	2.27E-05	8.62E+00
RSF	MJ	9.40E-03	3.10E-03	4.62E-03	1.71E-02	2.00E-05	1.85E-04	6.91E-03	8.80E-06	6.29E-03
NRSF	MJ	3.86E-02	6.09E-03	1.60E-02	6.07E-02	5.41E-05	3.84E-04	7.94E-03	6.77E-06	5.61E-03
FW	m3	6.55E-02	1.27E-03	3.86E-03	7.06E-02	1.68E-05	1.01E-04	1.61E-03	3.26E-05	5.60E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	3.67E-01	9.84E-03	4.77E-03	3.81E-01	2.61E-04	7.11E-04	1.48E-02	1.46E-05	4.22E-02
NHWD	kg	2.50E-01	5.08E-01	9.67E-02	8.54E-01	1.94E-04	6.53E-02	8.84E-02	1.98E-01	-2.57E-01
RWD	kg	4.17E-03	3.42E-06	1.10E-06	4.18E-03	3.42E-08	2.30E-07	6.90E-06	6.16E-09	2.86E-03
CRU	kg	6.34E-22	-4.00E-22	1.09E-22	3.43E-22	-2.40E-24	-1.44E-23	9.55E-23	-3.05E-24	-5.37E-22
MFR	kg	1.44E-01	1.04E-02	8.18E-03	1.63E-01	1.49E-04	6.54E-04	1.44E-02	2.03E-05	-5.80E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.12: LCA analysis results for profiled steel elements with thickness 1.15 mm

Results per 1 m ² : profiled steel elements 1.15 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	3.08E+01	8.44E-01	1.44E-01	3.17E+01	2.38E-02	5.71E-02	2.84E-01	1.29E-03	-1.87E+01
GWP-fossil	eq. kg CO2	3.06E+01	8.42E-01	1.40E-01	3.16E+01	2.38E-02	5.71E-02	2.89E-01	1.29E-03	-1.84E+01
GWP-biogenic	eq. kg CO2	8.00E-02	7.46E-04	3.84E-03	8.46E-02	5.16E-06	4.37E-05	-5.11E-03	3.90E-06	-2.53E-01
GWP-luluc	eq. kg CO2	2.03E+00	4.16E-04	4.21E-05	2.03E+00	2.68E-06	2.78E-05	4.23E-04	2.53E-07	-2.30E-02
ODP	eq. kg CFC 11	2.27E-08	1.83E-08	1.31E-09	4.23E-08	3.79E-10	1.30E-09	4.59E-09	4.46E-11	-8.12E-09
AP	mol H+	6.13E-02	1.84E-03	9.97E-04	6.41E-02	2.21E-04	1.41E-04	3.24E-03	8.31E-06	-4.54E-02
EP-freshwater	eq. kg P	6.04E-03	5.99E-05	1.59E-04	6.26E-03	7.32E-07	4.21E-06	1.70E-04	6.01E-08	-3.28E-04
EP-marine	eq. kg N	1.26E-02	4.65E-04	1.49E-04	1.32E-02	1.02E-04	3.85E-05	7.56E-04	3.62E-06	-5.81E-04
EP-terrestrial	eq. mol N	1.81E-01	4.72E-03	1.27E-03	1.87E-01	1.11E-03	3.95E-04	8.43E-03	3.88E-05	-6.10E-03
POCP	eq. kg NMVOC	1.59E-02	2.86E-03	4.11E-04	1.91E-02	3.30E-04	2.31E-04	2.52E-03	1.54E-05	-7.51E-03
ADP-minerals & metals	eq. kg Sb.	2.05E-03	2.82E-06	5.40E-07	2.05E-03	8.53E-09	1.64E-07	1.78E-05	1.38E-09	2.32E-06
ADP-fossil	MJ	2.95E+02	1.21E+01	1.88E+00	3.09E+02	3.14E-01	8.73E-01	3.96E+00	3.30E-02	-1.48E+02
WDP	eq. m3	5.84E-01	5.98E-02	2.92E-02	6.73E-01	7.77E-04	4.48E-03	6.55E-02	1.13E-04	-1.00E+00
ADDITIONAL IMPACTS										
PM	Disease incidence	1.07E-07	6.28E-08	2.33E-09	1.72E-07	6.16E-09	5.65E-09	4.47E-08	2.10E-10	-3.42E-07
IRP	eq. kBq U235	5.78E-02	1.62E-02	4.49E-03	7.85E-02	1.48E-04	1.09E-03	3.11E-02	3.12E-05	5.26E-01
ETP-fw	CTUe	6.84E+00	5.92E+00	6.37E-01	1.34E+01	1.49E-01	4.17E-01	3.07E+00	1.38E-02	2.63E+00
HTTP-c	CTUh	9.65E-09	3.85E-10	6.43E-11	1.01E-08	7.31E-12	2.55E-11	4.43E-10	4.38E-13	9.24E-08
HTTP-nc	CTUh	2.69E-08	8.56E-09	2.64E-09	3.81E-08	5.13E-11	6.24E-10	1.99E-08	5.80E-12	2.01E-08
SQP	dimensionless	4.09E+00	7.23E+00	3.78E-01	1.17E+01	2.09E-02	8.79E-01	6.95E+00	6.75E-02	-6.55E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	2.18E+01	1.88E-01	1.44E-01	2.21E+01	1.78E-03	1.27E-02	6.07E-01	6.50E-04	1.35E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.18E+01	1.88E-01	1.44E-01	2.21E+01	1.78E-03	1.27E-02	6.07E-01	6.50E-04	1.35E+01
PEN-RE	MJ	3.06E+02	1.10E+01	1.83E+00	3.19E+02	2.86E-01	7.97E-01	3.73E+00	2.99E-02	-1.40E+02
PENRM	MJ	3.22E-01	1.04E+00	4.62E-02	1.41E+00	2.87E-02	7.57E-02	2.32E-01	3.01E-03	-1.55E-02
PENRT	MJ	3.06E+02	1.21E+01	1.88E+00	3.20E+02	3.14E-01	8.73E-01	3.96E+00	3.30E-02	-1.40E+02
SM	MJ	9.85E-01	1.32E-02	7.89E-03	1.01E+00	1.82E-04	8.73E-04	1.12E+01	2.61E-05	9.91E+00
RSF	MJ	1.08E-02	3.56E-03	4.62E-03	1.90E-02	2.00E-05	2.13E-04	7.95E-03	1.01E-05	7.24E-03
NRSF	MJ	4.44E-02	7.01E-03	1.60E-02	6.74E-02	5.41E-05	4.42E-04	9.13E-03	7.79E-06	6.45E-03
FW	m3	7.53E-02	1.46E-03	3.86E-03	8.06E-02	1.68E-05	1.16E-04	1.85E-03	3.75E-05	6.44E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	4.22E-01	1.13E-02	4.77E-03	4.38E-01	2.61E-04	8.18E-04	1.70E-02	1.68E-05	4.85E-02
NHWD	kg	2.87E-01	5.84E-01	9.67E-02	9.68E-01	1.94E-04	7.51E-02	1.02E-01	2.27E-01	-2.96E-01
RWD	kg	4.80E-03	3.93E-06	1.10E-06	4.81E-03	3.42E-08	2.64E-07	7.93E-06	7.08E-09	3.29E-03
CRU	kg	7.29E-22	-4.60E-22	1.09E-22	3.78E-22	-2.40E-24	-1.66E-23	1.10E-22	-3.51E-24	-6.17E-22
MFR	kg	1.66E-01	1.20E-02	8.18E-03	1.86E-01	1.49E-04	7.52E-04	1.65E-02	2.33E-05	-6.67E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.13: LCA analysis results for profiled steel elements with thickness 1.20 mm

Results per 1 m ² : profiled steel elements 1.20 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	3.21E+01	8.80E-01	1.44E-01	3.31E+01	2.38E-02	5.96E-02	2.96E-01	1.35E-03	-1.95E+01
GWP-fossil	eq. kg CO2	3.20E+01	8.79E-01	1.40E-01	3.30E+01	2.38E-02	5.96E-02	3.01E-01	1.34E-03	-1.92E+01
GWP-biogenic	eq. kg CO2	8.35E-02	7.79E-04	3.84E-03	8.81E-02	5.16E-06	4.56E-05	-5.33E-03	4.07E-06	-2.64E-01
GWP-luluc	eq. kg CO2	2.12E+00	4.34E-04	4.21E-05	2.12E+00	2.68E-06	2.91E-05	4.42E-04	2.64E-07	-2.40E-02
ODP	eq. kg CFC 11	2.36E-08	1.91E-08	1.31E-09	4.41E-08	3.79E-10	1.35E-09	4.78E-09	4.65E-11	-8.47E-09
AP	mol H+	6.39E-02	1.92E-03	9.97E-04	6.69E-02	2.21E-04	1.47E-04	3.38E-03	8.67E-06	-4.74E-02
EP-freshwater	eq. kg P	6.30E-03	6.25E-05	1.59E-04	6.52E-03	7.32E-07	4.40E-06	1.78E-04	6.27E-08	-3.42E-04
EP-marine	eq. kg N	1.32E-02	4.85E-04	1.49E-04	1.38E-02	1.02E-04	4.02E-05	7.88E-04	3.78E-06	-6.06E-04
EP-terrestrial	eq. mol N	1.89E-01	4.93E-03	1.27E-03	1.95E-01	1.11E-03	4.12E-04	8.79E-03	4.05E-05	-6.36E-03
POCP	eq. kg NMVOC	1.66E-02	2.98E-03	4.11E-04	1.99E-02	3.30E-04	2.41E-04	2.63E-03	1.61E-05	-7.84E-03
ADP-minerals & metals	eq. kg Sb.	2.13E-03	2.94E-06	5.40E-07	2.14E-03	8.53E-09	1.71E-07	1.86E-05	1.44E-09	2.42E-06
ADP-fossil	MJ	3.08E+02	1.26E+01	1.88E+00	3.22E+02	3.14E-01	9.11E-01	4.13E+00	3.44E-02	-1.55E+02
WDP	eq. m3	6.10E-01	6.24E-02	2.92E-02	7.01E-01	7.77E-04	4.68E-03	6.84E-02	1.18E-04	-1.05E+00
ADDITIONAL IMPACTS										
PM	Disease incidence	1.11E-07	6.55E-08	2.33E-09	1.79E-07	6.16E-09	5.90E-09	4.66E-08	2.19E-10	-3.57E-07
IRP	eq. kBq U235	6.03E-02	1.69E-02	4.49E-03	8.17E-02	1.48E-04	1.14E-03	3.25E-02	3.25E-05	5.49E-01
ETP-fw	CTUe	7.14E+00	6.17E+00	6.37E-01	1.39E+01	1.49E-01	4.35E-01	3.20E+00	1.44E-02	2.74E+00
HTTP-c	CTUh	1.01E-08	4.02E-10	6.43E-11	1.05E-08	7.31E-12	2.66E-11	4.62E-10	4.57E-13	9.64E-08
HTTP-nc	CTUh	2.81E-08	8.93E-09	2.64E-09	3.96E-08	5.13E-11	6.51E-10	2.08E-08	6.05E-12	2.10E-08
SQP	dimensionless	4.27E+00	7.55E+00	3.78E-01	1.22E+01	2.09E-02	9.17E-01	7.25E+00	7.05E-02	-6.83E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	2.27E+01	1.96E-01	1.44E-01	2.31E+01	1.78E-03	1.32E-02	6.34E-01	6.78E-04	1.41E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.27E+01	1.96E-01	1.44E-01	2.31E+01	1.78E-03	1.32E-02	6.34E-01	6.78E-04	1.41E+01
PEN-RE	MJ	3.19E+02	1.15E+01	1.83E+00	3.33E+02	2.86E-01	8.32E-01	3.89E+00	3.12E-02	-1.46E+02
PENRM	MJ	3.36E-01	1.09E+00	4.62E-02	1.47E+00	2.87E-02	7.90E-02	2.42E-01	3.14E-03	-1.62E-02
PENRT	MJ	3.20E+02	1.26E+01	1.88E+00	3.34E+02	3.14E-01	9.11E-01	4.13E+00	3.44E-02	-1.46E+02
SM	MJ	1.03E+00	1.38E-02	7.89E-03	1.05E+00	1.82E-04	9.11E-04	1.17E+01	2.72E-05	1.03E+01
RSF	MJ	1.13E-02	3.72E-03	4.62E-03	1.96E-02	2.00E-05	2.22E-04	8.29E-03	1.06E-05	7.55E-03
NRSF	MJ	4.63E-02	7.31E-03	1.60E-02	6.97E-02	5.41E-05	4.61E-04	9.52E-03	8.13E-06	6.73E-03
FW	m3	7.86E-02	1.52E-03	3.86E-03	8.40E-02	1.68E-05	1.22E-04	1.93E-03	3.92E-05	6.72E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	4.40E-01	1.18E-02	4.77E-03	4.57E-01	2.61E-04	8.54E-04	1.78E-02	1.75E-05	5.06E-02
NHWD	kg	3.00E-01	6.09E-01	9.67E-02	1.01E+00	1.94E-04	7.84E-02	1.06E-01	2.37E-01	-3.09E-01
RWD	kg	5.01E-03	4.10E-06	1.10E-06	5.01E-03	3.42E-08	2.75E-07	8.28E-06	7.39E-09	3.44E-03
CRU	kg	7.61E-22	-4.80E-22	1.09E-22	3.90E-22	-2.40E-24	-1.73E-23	1.15E-22	-3.67E-24	-6.44E-22
MFR	kg	1.73E-01	1.25E-02	8.18E-03	1.94E-01	1.49E-04	7.85E-04	1.73E-02	2.43E-05	-6.96E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.14: LCA analysis results for profiled steel elements with thickness 1.25 mm

Results per 1 m ² : profiled steel elements 1.25 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO ₂	3.34E+01	9.17E-01	1.44E-01	3.45E+01	2.38E-02	6.21E-02	3.09E-01	1.40E-03	-2.03E+01
GWP-fossil	eq. kg CO ₂	3.33E+01	9.16E-01	1.40E-01	3.44E+01	2.38E-02	6.20E-02	3.14E-01	1.40E-03	-2.00E+01
GWP-biogenic	eq. kg CO ₂	8.70E-02	8.11E-04	3.84E-03	9.16E-02	5.16E-06	4.75E-05	-5.55E-03	4.24E-06	-2.75E-01
GWP-luluc	eq. kg CO ₂	2.20E+00	4.52E-04	4.21E-05	2.20E+00	2.68E-06	3.03E-05	4.60E-04	2.75E-07	-2.50E-02
ODP	eq. kg CFC 11	2.46E-08	1.99E-08	1.31E-09	4.59E-08	3.79E-10	1.41E-09	4.98E-09	4.85E-11	-8.82E-09
AP	mol H ⁺	6.66E-02	2.00E-03	9.97E-04	6.96E-02	2.21E-04	1.54E-04	3.52E-03	9.03E-06	-4.94E-02
EP-freshwater	eq. kg P	6.57E-03	6.51E-05	1.59E-04	6.79E-03	7.32E-07	4.58E-06	1.85E-04	6.53E-08	-3.56E-04
EP-marine	eq. kg N	1.37E-02	5.05E-04	1.49E-04	1.44E-02	1.02E-04	4.18E-05	8.21E-04	3.94E-06	-6.31E-04
EP-terrestrial	eq. mol N	1.96E-01	5.13E-03	1.27E-03	2.03E-01	1.11E-03	4.30E-04	9.16E-03	4.22E-05	-6.63E-03
POCP	eq. kg NMVOC	1.72E-02	3.11E-03	4.11E-04	2.08E-02	3.30E-04	2.51E-04	2.74E-03	1.68E-05	-8.17E-03
ADP-minerals & metals	eq. kg Sb.	2.22E-03	3.06E-06	5.40E-07	2.23E-03	8.53E-09	1.78E-07	1.94E-05	1.50E-09	2.52E-06
ADP-fossil	MJ	3.20E+02	1.31E+01	1.88E+00	3.35E+02	3.14E-01	9.49E-01	4.30E+00	3.58E-02	-1.61E+02
WDP	eq. m ³	6.35E-01	6.50E-02	2.92E-02	7.29E-01	7.77E-04	4.87E-03	7.12E-02	1.23E-04	-1.09E+00
ADDITIONAL IMPACTS										
PM	Disease incidence	1.16E-07	6.82E-08	2.33E-09	1.86E-07	6.16E-09	6.14E-09	4.86E-08	2.28E-10	-3.72E-07
IRP	eq. kBq U235	6.29E-02	1.76E-02	4.49E-03	8.50E-02	1.48E-04	1.19E-03	3.39E-02	3.39E-05	5.72E-01
ETP-fw	CTUe	7.44E+00	6.43E+00	6.37E-01	1.45E+01	1.49E-01	4.53E-01	3.34E+00	1.50E-02	2.86E+00
HTTP-c	CTUh	1.05E-08	4.19E-10	6.43E-11	1.10E-08	7.31E-12	2.77E-11	4.82E-10	4.76E-13	1.00E-07
HTTP-nc	CTUh	2.92E-08	9.30E-09	2.64E-09	4.12E-08	5.13E-11	6.78E-10	2.17E-08	6.30E-12	2.18E-08
SQP	dimensionless	4.45E+00	7.86E+00	3.78E-01	1.27E+01	2.09E-02	9.55E-01	7.55E+00	7.34E-02	-7.12E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	2.37E+01	2.04E-01	1.44E-01	2.40E+01	1.78E-03	1.38E-02	6.60E-01	7.07E-04	1.46E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.37E+01	2.04E-01	1.44E-01	2.40E+01	1.78E-03	1.38E-02	6.60E-01	7.07E-04	1.46E+01
PEN-RE	MJ	3.33E+02	1.20E+01	1.83E+00	3.47E+02	2.86E-01	8.66E-01	4.05E+00	3.25E-02	-1.52E+02
PENRM	MJ	3.50E-01	1.14E+00	4.62E-02	1.53E+00	2.87E-02	8.23E-02	2.52E-01	3.28E-03	-1.69E-02
PENRT	MJ	3.33E+02	1.31E+01	1.88E+00	3.48E+02	3.14E-01	9.49E-01	4.30E+00	3.58E-02	-1.52E+02
SM	MJ	1.07E+00	1.44E-02	7.89E-03	1.09E+00	1.82E-04	9.49E-04	1.21E+01	2.83E-05	1.08E+01
RSF	MJ	1.17E-02	3.87E-03	4.62E-03	2.02E-02	2.00E-05	2.32E-04	8.64E-03	1.10E-05	7.87E-03
NRSF	MJ	4.82E-02	7.62E-03	1.60E-02	7.19E-02	5.41E-05	4.80E-04	9.92E-03	8.47E-06	7.01E-03
FW	m3	8.19E-02	1.58E-03	3.86E-03	8.73E-02	1.68E-05	1.27E-04	2.01E-03	4.08E-05	7.00E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	4.58E-01	1.23E-02	4.77E-03	4.75E-01	2.61E-04	8.89E-04	1.85E-02	1.83E-05	5.27E-02
NHWD	kg	3.12E-01	6.34E-01	9.67E-02	1.04E+00	1.94E-04	8.17E-02	1.10E-01	2.47E-01	-3.22E-01
RWD	kg	5.22E-03	4.28E-06	1.10E-06	5.22E-03	3.42E-08	2.87E-07	8.62E-06	7.70E-09	3.58E-03
CRU	kg	7.93E-22	-5.00E-22	1.09E-22	4.01E-22	-2.40E-24	-1.80E-23	1.19E-22	-3.82E-24	-6.71E-22
MFR	kg	1.80E-01	1.30E-02	8.18E-03	2.02E-01	1.49E-04	8.17E-04	1.80E-02	2.53E-05	-7.25E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.15: LCA analysis results for profiled steel elements with thickness 1.50 mm

Results per 1 m ² : profiled steel elements 1.50 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	4.01E+01	1.10E+00	1.44E-01	4.14E+01	2.38E-02	7.45E-02	3.71E-01	1.68E-03	-2.44E+01
GWP-fossil	eq. kg CO2	4.00E+01	1.10E+00	1.40E-01	4.12E+01	2.38E-02	7.44E-02	3.77E-01	1.68E-03	-2.40E+01
GWP-biogenic	eq. kg CO2	1.04E-01	9.73E-04	3.84E-03	1.09E-01	5.16E-06	5.71E-05	-6.66E-03	5.08E-06	-3.30E-01
GWP-luluc	eq. kg CO2	2.64E+00	5.42E-04	4.21E-05	2.64E+00	2.68E-06	3.63E-05	5.52E-04	3.31E-07	-3.00E-02
ODP	eq. kg CFC 11	2.96E-08	2.39E-08	1.31E-09	5.48E-08	3.79E-10	1.69E-09	5.98E-09	5.82E-11	-1.06E-08
AP	mol H+	7.99E-02	2.40E-03	9.97E-04	8.33E-02	2.21E-04	1.84E-04	4.22E-03	1.08E-05	-5.92E-02
EP-freshwater	eq. kg P	7.88E-03	7.81E-05	1.59E-04	8.12E-03	7.32E-07	5.49E-06	2.22E-04	7.83E-08	-4.27E-04
EP-marine	eq. kg N	1.65E-02	6.06E-04	1.49E-04	1.72E-02	1.02E-04	5.02E-05	9.85E-04	4.73E-06	-7.57E-04
EP-terrestrial	eq. mol N	2.36E-01	6.16E-03	1.27E-03	2.43E-01	1.11E-03	5.15E-04	1.10E-02	5.07E-05	-7.95E-03
POCP	eq. kg NMVOC	2.07E-02	3.73E-03	4.11E-04	2.48E-02	3.30E-04	3.01E-04	3.29E-03	2.01E-05	-9.80E-03
ADP-minerals & metals	eq. kg Sb.	2.67E-03	3.68E-06	5.40E-07	2.67E-03	8.53E-09	2.13E-07	2.33E-05	1.80E-09	3.03E-06
ADP-fossil	MJ	3.85E+02	1.57E+01	1.88E+00	4.02E+02	3.14E-01	1.14E+00	5.16E+00	4.30E-02	-1.93E+02
WDP	eq. m3	7.62E-01	7.80E-02	2.92E-02	8.69E-01	7.77E-04	5.85E-03	8.54E-02	1.48E-04	-1.31E+00
ADDITIONAL IMPACTS										
PM	Disease incidence	1.39E-07	8.19E-08	2.33E-09	2.23E-07	6.16E-09	7.37E-09	5.83E-08	2.73E-10	-4.47E-07
IRP	eq. kBq U235	7.54E-02	2.11E-02	4.49E-03	1.01E-01	1.48E-04	1.43E-03	4.06E-02	4.06E-05	6.86E-01
ETP-fw	CTUe	8.92E+00	7.72E+00	6.37E-01	1.73E+01	1.49E-01	5.43E-01	4.00E+00	1.80E-02	3.43E+00
HTTP-c	CTUh	1.26E-08	5.03E-10	6.43E-11	1.32E-08	7.31E-12	3.32E-11	5.78E-10	5.71E-13	1.20E-07
HTTP-nc	CTUh	3.51E-08	1.12E-08	2.64E-09	4.89E-08	5.13E-11	8.14E-10	2.60E-08	7.56E-12	2.62E-08
SQP	dimensionless	5.34E+00	9.43E+00	3.78E-01	1.51E+01	2.09E-02	1.15E+00	9.06E+00	8.81E-02	-8.54E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	2.84E+01	2.45E-01	1.44E-01	2.88E+01	1.78E-03	1.65E-02	7.92E-01	8.48E-04	1.76E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	2.84E+01	2.45E-01	1.44E-01	2.88E+01	1.78E-03	1.65E-02	7.92E-01	8.48E-04	1.76E+01
PEN-RE	MJ	3.99E+02	1.44E+01	1.83E+00	4.15E+02	2.86E-01	1.04E+00	4.86E+00	3.91E-02	-1.82E+02
PENRM	MJ	4.20E-01	1.36E+00	4.62E-02	1.83E+00	2.87E-02	9.88E-02	3.03E-01	3.93E-03	-2.02E-02
PENRT	MJ	4.00E+02	1.57E+01	1.88E+00	4.17E+02	3.14E-01	1.14E+00	5.16E+00	4.30E-02	-1.82E+02
SM	MJ	1.28E+00	1.72E-02	7.89E-03	1.31E+00	1.82E-04	1.14E-03	1.46E+01	3.40E-05	1.29E+01
RSF	MJ	1.41E-02	4.65E-03	4.62E-03	2.34E-02	2.00E-05	2.78E-04	1.04E-02	1.32E-05	9.44E-03
NRSF	MJ	5.79E-02	9.14E-03	1.60E-02	8.31E-02	5.41E-05	5.76E-04	1.19E-02	1.02E-05	8.41E-03
FW	m3	9.83E-02	1.90E-03	3.86E-03	1.04E-01	1.68E-05	1.52E-04	2.41E-03	4.89E-05	8.40E-03

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	5.50E-01	1.48E-02	4.77E-03	5.69E-01	2.61E-04	1.07E-03	2.22E-02	2.19E-05	6.33E-02
NHWD	kg	3.75E-01	7.61E-01	9.67E-02	1.23E+00	1.94E-04	9.80E-02	1.33E-01	2.96E-01	-3.86E-01
RWD	kg	6.26E-03	5.13E-06	1.10E-06	6.27E-03	3.42E-08	3.44E-07	1.03E-05	9.24E-09	4.29E-03
CRU	kg	9.51E-22	-6.00E-22	1.09E-22	4.60E-22	-2.40E-24	-2.16E-23	1.43E-22	-4.58E-24	-8.05E-22
MFR	kg	2.16E-01	1.56E-02	8.18E-03	2.40E-01	1.49E-04	9.81E-04	2.16E-02	3.04E-05	-8.70E-02
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.16: LCA analysis results for profiled steel elements with thickness 2.00 mm

Results per 1 m ² : profiled steel elements 2.00 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	5.35E+01	1.47E+00	1.44E-01	5.51E+01	2.38E-02	9.94E-02	4.94E-01	2.24E-03	-3.25E+01
GWP-fossil	eq. kg CO2	5.33E+01	1.47E+00	1.40E-01	5.49E+01	2.38E-02	9.93E-02	5.02E-01	2.24E-03	-3.20E+01
GWP-biogenic	eq. kg CO2	1.39E-01	1.30E-03	3.84E-03	1.44E-01	5.16E-06	7.61E-05	-8.88E-03	6.78E-06	-4.40E-01
GWP-luluc	eq. kg CO2	3.53E+00	7.23E-04	4.21E-05	3.53E+00	2.68E-06	4.84E-05	7.36E-04	4.41E-07	-4.00E-02
ODP	eq. kg CFC 11	3.94E-08	3.19E-08	1.31E-09	7.26E-08	3.79E-10	2.25E-09	7.97E-09	7.76E-11	-1.41E-08
AP	mol H+	1.07E-01	3.20E-03	9.97E-04	1.11E-01	2.21E-04	2.46E-04	5.63E-03	1.44E-05	-7.90E-02
EP-freshwater	eq. kg P	1.05E-02	1.04E-04	1.59E-04	1.08E-02	7.32E-07	7.33E-06	2.96E-04	1.04E-07	-5.70E-04
EP-marine	eq. kg N	2.20E-02	8.08E-04	1.49E-04	2.29E-02	1.02E-04	6.69E-05	1.31E-03	6.30E-06	-1.01E-03
EP-terrestrial	eq. mol N	3.14E-01	8.21E-03	1.27E-03	3.24E-01	1.11E-03	6.87E-04	1.47E-02	6.76E-05	-1.06E-02
POCP	eq. kg NMVOC	2.76E-02	4.97E-03	4.11E-04	3.30E-02	3.30E-04	4.01E-04	4.39E-03	2.68E-05	-1.31E-02
ADP-minerals & metals	eq. kg Sb.	3.56E-03	4.90E-06	5.40E-07	3.56E-03	8.53E-09	2.84E-07	3.10E-05	2.41E-09	4.03E-06
ADP-fossil	MJ	5.13E+02	2.10E+01	1.88E+00	5.36E+02	3.14E-01	1.52E+00	6.88E+00	5.73E-02	-2.58E+02
WDP	eq. m3	1.02E+00	1.04E-01	2.92E-02	1.15E+00	7.77E-04	7.80E-03	1.14E-01	1.97E-04	-1.75E+00
ADDITIONAL IMPACTS										
PM	Disease incidence	1.85E-07	1.09E-07	2.33E-09	2.97E-07	2.61E-04	9.83E-09	7.77E-08	3.65E-10	-5.96E-07
IRP	eq. kBq U235	1.01E-01	2.82E-02	4.49E-03	1.33E-01	1.94E-04	1.90E-03	5.42E-02	5.42E-05	9.15E-01
ETP-fw	CTUe	1.19E+01	1.03E+01	6.37E-01	2.28E+01	3.42E-08	7.25E-01	5.34E+00	2.40E-02	4.57E+00
HTTP-c	CTUh	1.68E-08	6.70E-10	6.43E-11	1.75E-08	-2.40E-24	4.43E-11	7.70E-10	7.61E-13	1.61E-07
HTTP-nc	CTUh	4.68E-08	1.49E-08	2.64E-09	6.43E-08	1.49E-04	1.08E-09	3.47E-08	1.01E-11	3.49E-08
SQP	dimensionless	7.11E+00	1.26E+01	3.78E-01	2.01E+01	0.00E+00	1.53E+00	1.21E+01	1.17E-01	-1.14E+01



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	3.79E+01	3.27E-01	1.44E-01	3.84E+01	0.00E+00	2.20E-02	1.06E+00	1.13E-03	2.34E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	3.79E+01	3.27E-01	1.44E-01	3.84E+01	1.78E-03	2.20E-02	1.06E+00	1.13E-03	2.34E+01
PEN-RE	MJ	5.32E+02	1.91E+01	1.83E+00	5.53E+02	2.86E-01	1.39E+00	6.48E+00	5.21E-02	-2.43E+02
PENRM	MJ	5.60E-01	1.82E+00	4.62E-02	2.42E+00	2.87E-02	1.32E-01	4.03E-01	5.24E-03	-2.70E-02
PENRT	MJ	5.33E+02	2.10E+01	1.88E+00	5.56E+02	3.14E-01	1.52E+00	6.88E+00	5.73E-02	-2.43E+02
SM	MJ	1.71E+00	2.30E-02	7.89E-03	1.74E+00	1.82E-04	1.52E-03	1.94E+01	4.54E-05	1.72E+01
RSF	MJ	1.88E-02	6.20E-03	4.62E-03	2.96E-02	2.00E-05	3.70E-04	1.38E-02	1.76E-05	1.26E-02
NRSF	MJ	7.72E-02	1.22E-02	1.60E-02	1.05E-01	5.41E-05	7.68E-04	1.59E-02	1.35E-05	1.12E-02
FW	m3	1.31E-01	2.53E-03	3.86E-03	1.37E-01	1.68E-05	2.03E-04	3.22E-03	6.53E-05	1.12E-02

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	7.33E-01	1.97E-02	4.77E-03	7.58E-01	2.61E-04	1.42E-03	2.96E-02	2.92E-05	8.44E-02
NHWD	kg	5.00E-01	1.02E+00	9.67E-02	1.61E+00	1.94E-04	1.31E-01	1.77E-01	3.95E-01	-5.15E-01
RWD	kg	8.35E-03	6.84E-06	1.10E-06	8.36E-03	3.42E-08	4.59E-07	1.38E-05	1.23E-08	5.73E-03
CRU	kg	1.27E-21	-8.00E-22	1.09E-22	5.77E-22	-2.40E-24	-2.88E-23	1.91E-22	-6.11E-24	-1.07E-21
MFR	kg	2.89E-01	2.08E-02	8.18E-03	3.18E-01	1.49E-04	1.31E-03	2.88E-02	4.05E-05	-1.16E-01
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.17: LCA analysis results for profiled steel elements with thickness 2.50 mm

Results per 1 m ² : profiled steel elements 2.50 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	6.68E+01	1.83E+00	1.44E-01	6.88E+01	2.38E-02	1.24E-01	6.18E-01	2.81E-03	-4.06E+01
GWP-fossil	eq. kg CO2	6.66E+01	1.83E+00	1.40E-01	6.86E+01	2.38E-02	1.24E-01	6.28E-01	2.80E-03	-4.00E+01
GWP-biogenic	eq. kg CO2	1.74E-01	1.62E-03	3.84E-03	1.79E-01	5.16E-06	9.51E-05	-1.11E-02	8.47E-06	-5.50E-01
GWP-luluc	eq. kg CO2	4.41E+00	9.04E-04	4.21E-05	4.41E+00	2.68E-06	6.05E-05	9.20E-04	5.51E-07	-5.00E-02
ODP	eq. kg CFC 11	4.93E-08	3.99E-08	1.31E-09	9.04E-08	3.79E-10	2.82E-09	9.97E-09	9.70E-11	-1.76E-08
AP	mol H+	1.33E-01	4.00E-03	9.97E-04	1.38E-01	2.21E-04	3.07E-04	7.03E-03	1.81E-05	-9.87E-02
EP-freshwater	eq. kg P	1.31E-02	1.30E-04	1.59E-04	1.34E-02	7.32E-07	9.16E-06	3.70E-04	1.31E-07	-7.12E-04
EP-marine	eq. kg N	2.74E-02	1.01E-03	1.49E-04	2.86E-02	1.02E-04	8.37E-05	1.64E-03	7.88E-06	-1.26E-03
EP-terrestrial	eq. mol N	3.93E-01	1.03E-02	1.27E-03	4.04E-01	1.11E-03	8.59E-04	1.83E-02	8.45E-05	-1.33E-02
POCP	eq. kg NMVOC	3.45E-02	6.21E-03	4.11E-04	4.11E-02	3.30E-04	5.02E-04	5.48E-03	3.35E-05	-1.63E-02
ADP-minerals & metals	eq. kg Sb.	4.45E-03	6.13E-06	5.40E-07	4.45E-03	8.53E-09	3.55E-07	3.88E-05	3.01E-09	5.04E-06
ADP-fossil	MJ	6.41E+02	2.62E+01	1.88E+00	6.69E+02	3.14E-01	1.90E+00	8.60E+00	7.16E-02	-3.22E+02
WDP	eq. m3	1.27E+00	1.30E-01	2.92E-02	1.43E+00	7.77E-04	9.74E-03	1.42E-01	2.46E-04	-2.18E+00
ADDITIONAL IMPACTS										
PM	Disease incidence	2.32E-07	1.36E-07	2.33E-09	3.70E-07	2.61E-04	1.23E-08	9.72E-08	4.56E-10	-7.44E-07
IRP	eq. kBq U235	1.26E-01	3.52E-02	4.49E-03	1.65E-01	1.94E-04	2.38E-03	6.77E-02	6.77E-05	1.14E+00
ETP-fw	CTUe	1.49E+01	1.29E+01	6.37E-01	2.84E+01	3.42E-08	9.06E-01	6.67E+00	3.00E-02	5.72E+00
HTTP-c	CTUh	2.10E-08	8.38E-10	6.43E-11	2.19E-08	-2.40E-24	5.54E-11	9.63E-10	9.51E-13	2.01E-07
HTTP-nc	CTUh	5.84E-08	1.86E-08	2.64E-09	7.97E-08	1.49E-04	1.36E-09	4.33E-08	1.26E-11	4.37E-08
SQP	dimensionless	8.89E+00	1.57E+01	3.78E-01	2.50E+01	0.00E+00	1.91E+00	1.51E+01	1.47E-01	-1.42E+01



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	4.74E+01	4.09E-01	1.44E-01	4.79E+01	0.00E+00	2.75E-02	1.32E+00	1.41E-03	2.93E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	4.74E+01	4.09E-01	1.44E-01	4.79E+01	1.78E-03	2.75E-02	1.32E+00	1.41E-03	2.93E+01
PEN-RE	MJ	6.65E+02	2.39E+01	1.83E+00	6.91E+02	2.86E-01	1.73E+00	8.10E+00	6.51E-02	-3.04E+02
PENRM	MJ	7.00E-01	2.27E+00	4.62E-02	3.02E+00	2.87E-02	1.65E-01	5.04E-01	6.55E-03	-3.37E-02
PENRT	MJ	6.66E+02	2.62E+01	1.88E+00	6.94E+02	3.14E-01	1.90E+00	8.60E+00	7.16E-02	-3.04E+02
SM	MJ	2.14E+00	2.87E-02	7.89E-03	2.18E+00	1.82E-04	1.90E-03	2.43E+01	5.67E-05	2.15E+01
RSF	MJ	2.35E-02	7.75E-03	4.62E-03	3.59E-02	2.00E-05	4.63E-04	1.73E-02	2.20E-05	1.57E-02
NRSF	MJ	9.65E-02	1.52E-02	1.60E-02	1.28E-01	5.41E-05	9.60E-04	1.98E-02	1.69E-05	1.40E-02
FW	m3	1.64E-01	3.16E-03	3.86E-03	1.71E-01	1.68E-05	2.53E-04	4.02E-03	8.16E-05	1.40E-02

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	9.17E-01	2.46E-02	4.77E-03	9.46E-01	2.61E-04	1.78E-03	3.70E-02	3.65E-05	1.05E-01
NHWD	kg	6.24E-01	1.27E+00	9.67E-02	1.99E+00	1.94E-04	1.63E-01	2.21E-01	4.94E-01	-6.44E-01
RWD	kg	1.04E-02	8.55E-06	1.10E-06	1.04E-02	3.42E-08	5.74E-07	1.72E-05	1.54E-08	7.16E-03
CRU	kg	1.59E-21	-1.00E-21	1.09E-22	6.94E-22	-2.40E-24	-3.60E-23	2.39E-22	-7.64E-24	-1.34E-21
MFR	kg	3.61E-01	2.60E-02	8.18E-03	3.95E-01	1.49E-04	1.63E-03	3.60E-02	5.07E-05	-1.45E-01
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.18: LCA analysis results for profiled steel elements with thickness 3.00 mm

Results per 1 m ² : profiled steel elements 3.00 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	8.02E+01	2.20E+00	1.44E-01	8.26E+01	2.38E-02	1.49E-01	7.41E-01	3.37E-03	-4.87E+01
GWP-fossil	eq. kg CO2	7.99E+01	2.20E+00	1.40E-01	8.23E+01	2.38E-02	1.49E-01	7.53E-01	3.36E-03	-4.80E+01
GWP-biogenic	eq. kg CO2	2.09E-01	1.95E-03	3.84E-03	2.15E-01	5.16E-06	1.14E-04	-1.33E-02	1.02E-05	-6.61E-01
GWP-luluc	eq. kg CO2	5.29E+00	1.08E-03	4.21E-05	5.29E+00	2.68E-06	7.26E-05	1.10E-03	6.61E-07	-6.01E-02
ODP	eq. kg CFC 11	5.91E-08	4.78E-08	1.31E-09	1.08E-07	3.79E-10	3.38E-09	1.20E-08	1.16E-10	-2.12E-08
AP	mol H+	1.60E-01	4.80E-03	9.97E-04	1.66E-01	2.21E-04	3.69E-04	8.44E-03	2.17E-05	-1.18E-01
EP-freshwater	eq. kg P	1.58E-02	1.56E-04	1.59E-04	1.61E-02	7.32E-07	1.10E-05	4.44E-04	1.57E-07	-8.54E-04
EP-marine	eq. kg N	3.29E-02	1.21E-03	1.49E-04	3.43E-02	1.02E-04	1.00E-04	1.97E-03	9.45E-06	-1.51E-03
EP-terrestrial	eq. mol N	4.71E-01	1.23E-02	1.27E-03	4.85E-01	1.11E-03	1.03E-03	2.20E-02	1.01E-04	-1.59E-02
POCP	eq. kg NMVOC	4.14E-02	7.46E-03	4.11E-04	4.92E-02	3.30E-04	6.02E-04	6.58E-03	4.02E-05	-1.96E-02
ADP-minerals & metals	eq. kg Sb.	5.34E-03	7.35E-06	5.40E-07	5.34E-03	8.53E-09	4.27E-07	4.65E-05	3.61E-09	6.05E-06
ADP-fossil	MJ	7.69E+02	3.14E+01	1.88E+00	8.02E+02	3.14E-01	2.28E+00	1.03E+01	8.60E-02	-3.87E+02
WDP	eq. m3	1.52E+00	1.56E-01	2.92E-02	1.71E+00	7.77E-04	1.17E-02	1.71E-01	2.96E-04	-2.62E+00
ADDITIONAL IMPACTS										
PM	Disease incidence	2.78E-07	1.64E-07	2.33E-09	4.44E-07	2.61E-04	1.47E-08	1.17E-07	5.47E-10	-8.93E-07
IRP	eq. kBq U235	1.51E-01	4.22E-02	4.49E-03	1.98E-01	1.94E-04	2.85E-03	8.12E-02	8.13E-05	1.37E+00
ETP-fw	CTUe	1.78E+01	1.54E+01	6.37E-01	3.39E+01	3.42E-08	1.09E+00	8.01E+00	3.60E-02	6.86E+00
HTTP-c	CTUh	2.52E-08	1.01E-09	6.43E-11	2.63E-08	-2.40E-24	6.65E-11	1.16E-09	1.14E-12	2.41E-07
HTTP-nc	CTUh	7.01E-08	2.23E-08	2.64E-09	9.51E-08	1.49E-04	1.63E-09	5.20E-08	1.51E-11	5.24E-08
SQP	dimensionless	1.07E+01	1.89E+01	3.78E-01	2.99E+01	0.00E+00	2.29E+00	1.81E+01	1.76E-01	-1.71E+01



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	5.69E+01	4.91E-01	1.44E-01	5.75E+01	0.00E+00	3.31E-02	1.58E+00	1.70E-03	3.51E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	5.69E+01	4.91E-01	1.44E-01	5.75E+01	1.78E-03	3.31E-02	1.58E+00	1.70E-03	3.51E+01
PEN-RE	MJ	7.99E+02	2.87E+01	1.83E+00	8.29E+02	2.86E-01	2.08E+00	9.72E+00	7.81E-02	-3.65E+02
PENRM	MJ	8.39E-01	2.72E+00	4.62E-02	3.61E+00	2.87E-02	1.98E-01	6.05E-01	7.86E-03	-4.04E-02
PENRT	MJ	7.99E+02	3.14E+01	1.88E+00	8.33E+02	3.14E-01	2.28E+00	1.03E+01	8.60E-02	-3.65E+02
SM	MJ	2.57E+00	3.45E-02	7.89E-03	2.61E+00	1.82E-04	2.28E-03	2.91E+01	6.80E-05	2.59E+01
RSF	MJ	2.82E-02	9.30E-03	4.62E-03	4.21E-02	2.00E-05	5.56E-04	2.07E-02	2.64E-05	1.89E-02
NRSF	MJ	1.16E-01	1.83E-02	1.60E-02	1.50E-01	5.41E-05	1.15E-03	2.38E-02	2.03E-05	1.68E-02
FW	m3	1.97E-01	3.80E-03	3.86E-03	2.04E-01	1.68E-05	3.04E-04	4.83E-03	9.79E-05	1.68E-02

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	1.10E+00	2.95E-02	4.77E-03	1.13E+00	2.61E-04	2.13E-03	4.44E-02	4.38E-05	1.27E-01
NHWD	kg	7.49E-01	1.52E+00	9.67E-02	2.37E+00	1.94E-04	1.96E-01	2.65E-01	5.93E-01	-7.72E-01
RWD	kg	1.25E-02	1.03E-05	1.10E-06	1.25E-02	3.42E-08	6.89E-07	2.07E-05	1.85E-08	8.59E-03
CRU	kg	1.90E-21	-1.20E-21	1.09E-22	8.11E-22	-2.40E-24	-4.33E-23	2.87E-22	-9.16E-24	-1.61E-21
MFR	kg	4.33E-01	3.12E-02	8.18E-03	4.72E-01	1.49E-04	1.96E-03	4.32E-02	6.08E-05	-1.74E-01
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.19: LCA analysis results for profiled steel elements with thickness 3.50 mm

Results per 1 m ² : profiled steel elements 3.50 mm										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	9.36E+01	2.57E+00	1.44E-01	9.63E+01	2.38E-02	1.74E-01	8.65E-01	3.93E-03	-5.69E+01
GWP-fossil	eq. kg CO2	9.33E+01	2.56E+00	1.40E-01	9.60E+01	2.38E-02	1.74E-01	8.79E-01	3.92E-03	-5.60E+01
GWP-biogenic	eq. kg CO2	2.44E-01	2.27E-03	3.84E-03	2.50E-01	5.16E-06	1.33E-04	-1.55E-02	1.19E-05	-7.71E-01
GWP-luluc	eq. kg CO2	6.17E+00	1.27E-03	4.21E-05	6.17E+00	2.68E-06	8.47E-05	1.29E-03	7.71E-07	-7.01E-02
ODP	eq. kg CFC 11	6.90E-08	5.58E-08	1.31E-09	1.26E-07	3.79E-10	3.94E-09	1.40E-08	1.36E-10	-2.47E-08
AP	mol H+	1.86E-01	5.60E-03	9.97E-04	1.93E-01	2.21E-04	4.30E-04	9.85E-03	2.53E-05	-1.38E-01
EP-freshwater	eq. kg P	1.84E-02	1.82E-04	1.59E-04	1.87E-02	7.32E-07	1.28E-05	5.18E-04	1.83E-07	-9.97E-04
EP-marine	eq. kg N	3.84E-02	1.41E-03	1.49E-04	4.00E-02	1.02E-04	1.17E-04	2.30E-03	1.10E-05	-1.77E-03
EP-terrestrial	eq. mol N	5.50E-01	1.44E-02	1.27E-03	5.66E-01	1.11E-03	1.20E-03	2.56E-02	1.18E-04	-1.86E-02
POCP	eq. kg NMVOC	4.83E-02	8.70E-03	4.11E-04	5.74E-02	3.30E-04	7.02E-04	7.68E-03	4.69E-05	-2.29E-02
ADP-minerals & metals	eq. kg Sb.	6.23E-03	8.58E-06	5.40E-07	6.24E-03	8.53E-09	4.98E-07	5.43E-05	4.21E-09	7.06E-06
ADP-fossil	MJ	8.97E+02	3.67E+01	1.88E+00	9.36E+02	3.14E-01	2.66E+00	1.20E+01	1.00E-01	-4.51E+02
WDP	eq. m3	1.78E+00	1.82E-01	2.92E-02	1.99E+00	7.77E-04	1.36E-02	1.99E-01	3.45E-04	-3.06E+00
ADDITIONAL IMPACTS										
PM	Disease incidence	3.24E-07	1.91E-07	2.33E-09	5.18E-07	2.61E-04	1.72E-08	1.36E-07	6.38E-10	-1.04E-06
IRP	eq. kBq U235	1.76E-01	4.93E-02	4.49E-03	2.30E-01	1.94E-04	3.33E-03	9.48E-02	9.48E-05	1.60E+00
ETP-fw	CTUe	2.08E+01	1.80E+01	6.37E-01	3.95E+01	3.42E-08	1.27E+00	9.34E+00	4.20E-02	8.00E+00
HTTP-c	CTUh	2.94E-08	1.17E-09	6.43E-11	3.06E-08	-2.40E-24	7.76E-11	1.35E-09	1.33E-12	2.81E-07
HTTP-nc	CTUh	8.18E-08	2.60E-08	2.64E-09	1.10E-07	1.49E-04	1.90E-09	6.07E-08	1.76E-11	6.11E-08
SQP	dimensionless	1.25E+01	2.20E+01	3.78E-01	3.48E+01	0.00E+00	2.68E+00	2.11E+01	2.06E-01	-1.99E+01



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	6.63E+01	5.72E-01	1.44E-01	6.70E+01	0.00E+00	3.86E-02	1.85E+00	1.98E-03	4.10E+01
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	6.63E+01	5.72E-01	1.44E-01	6.70E+01	1.78E-03	3.86E-02	1.85E+00	1.98E-03	4.10E+01
PEN-RE	MJ	9.32E+02	3.35E+01	1.83E+00	9.67E+02	2.86E-01	2.43E+00	1.13E+01	9.11E-02	-4.26E+02
PENRM	MJ	9.79E-01	3.18E+00	4.62E-02	4.20E+00	2.87E-02	2.30E-01	7.06E-01	9.17E-03	-4.72E-02
PENRT	MJ	9.33E+02	3.67E+01	1.88E+00	9.71E+02	3.14E-01	2.66E+00	1.20E+01	1.00E-01	-4.26E+02
SM	MJ	3.00E+00	4.02E-02	7.89E-03	3.05E+00	1.82E-04	2.66E-03	3.40E+01	7.94E-05	3.02E+01
RSF	MJ	3.29E-02	1.08E-02	4.62E-03	4.84E-02	2.00E-05	6.48E-04	2.42E-02	3.08E-05	2.20E-02
NRSF	MJ	1.35E-01	2.13E-02	1.60E-02	1.72E-01	5.41E-05	1.34E-03	2.78E-02	2.37E-05	1.96E-02
FW	m3	2.29E-01	4.43E-03	3.86E-03	2.38E-01	1.68E-05	3.54E-04	5.63E-03	1.14E-04	1.96E-02

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	1.28E+00	3.44E-02	4.77E-03	1.32E+00	2.61E-04	2.49E-03	5.18E-02	5.11E-05	1.48E-01
NHWD	kg	8.74E-01	1.78E+00	9.67E-02	2.75E+00	1.94E-04	2.29E-01	3.09E-01	6.92E-01	-9.01E-01
RWD	kg	1.46E-02	1.20E-05	1.10E-06	1.46E-02	3.42E-08	8.03E-07	2.41E-05	2.16E-08	1.00E-02
CRU	kg	2.22E-21	-1.40E-21	1.09E-22	9.28E-22	-2.40E-24	-5.05E-23	3.34E-22	-1.07E-23	-1.88E-21
MFR	kg	5.05E-01	3.64E-02	8.18E-03	5.50E-01	1.49E-04	2.29E-03	5.03E-02	7.10E-05	-2.03E-01
MER	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



Table 6.20: LCA analysis results for 1 kg of profiled steel elements*

Results per 1 kg : profiled steel elements*										
ENVIRONMENTAL IMPACTS										
PARAMETER	UNIT	A1	A2	A3	A1-A3	C1	C2	C3	C4	D
GWP-total	eq. kg CO2	2.70E+00	7.40E-02	2.16E-02	-	3.57E-03	5.01E-03	2.49E-02	1.13E-04	-1.64E+00
GWP-fossil	eq. kg CO2	2.69E+00	7.39E-02	2.10E-02	-	3.57E-03	5.01E-03	2.53E-02	1.13E-04	-1.61E+00
GWP-biogenic	eq. kg CO2	7.02E-03	6.55E-05	5.75E-04	-	7.72E-07	3.84E-06	-4.48E-04	3.42E-07	-2.22E-02
GWP-luluc	eq. kg CO2	1.78E-01	3.65E-05	6.29E-06	-	4.01E-07	2.44E-06	3.71E-05	2.22E-08	-2.02E-03
ODP	eq. kg CFC 11	1.99E-09	1.61E-09	1.97E-10	-	5.67E-11	1.14E-10	4.02E-10	3.91E-12	-7.12E-10
AP	mol H+	5.38E-03	1.62E-04	1.49E-04	-	3.31E-05	1.24E-05	2.84E-04	7.29E-07	-3.98E-03
EP-freshwater	eq. kg P	5.30E-04	5.25E-06	2.37E-05	-	1.10E-07	3.70E-07	1.49E-05	5.27E-09	-2.87E-05
EP-marine	eq. kg N	1.11E-03	4.08E-05	2.23E-05	-	1.53E-05	3.38E-06	6.63E-05	3.18E-07	-5.09E-05
EP-terrestrial	eq. mol N	1.59E-02	4.14E-04	1.91E-04	-	1.67E-04	3.47E-05	7.39E-04	3.41E-06	-5.35E-04
POCP	eq. kg NMVOC	1.39E-03	2.51E-04	6.14E-05	-	4.93E-05	2.02E-05	2.21E-04	1.35E-06	-6.59E-04
ADP-minerals & metals	eq. kg Sb.	1.79E-04	2.47E-07	8.08E-08	-	1.28E-09	1.43E-08	1.56E-06	1.21E-10	2.04E-07
ADP-fossil	MJ	2.59E+01	1.06E+00	2.81E-01	-	4.70E-02	7.66E-02	3.47E-01	2.89E-03	-1.30E+01
WDP	eq. m3	5.12E-02	5.25E-03	4.37E-03	-	1.16E-04	3.93E-04	5.75E-03	9.94E-06	-8.81E-02
ADDITIONAL IMPACTS										
PM	Disease incidence	9.34E-09	5.51E-09	3.49E-10	-	9.22E-10	4.96E-10	3.92E-09	1.84E-11	-3.00E-08
IRP	eq. kBq U235	5.07E-03	1.42E-03	6.72E-04	-	2.22E-05	9.59E-05	2.73E-03	2.73E-06	4.61E-02
ETP-fw	CTUe	6.00E-01	5.19E-01	9.54E-02	-	2.23E-02	3.66E-02	2.69E-01	1.21E-03	2.31E-01
HTTP-c	CTUh	8.47E-10	3.38E-11	9.62E-12	-	1.09E-12	2.24E-12	3.89E-11	3.84E-14	8.10E-09
HTTP-nc	CTUh	2.36E-09	7.51E-10	3.95E-10	-	7.68E-12	5.47E-11	1.75E-09	5.09E-13	1.76E-09
SQP	dimensionless	3.59E-01	6.34E-01	5.65E-02	-	3.14E-03	7.71E-02	6.10E-01	5.92E-03	-5.75E-01



**ENVIRONMENTAL PRODUCT DECLARATION
PROFILED STEEL ELEMENTS**



ENVIRONMENTAL ASPECTS RELATED TO RESOURCES

PERE	MJ	1.91E+00	1.65E-02	2.15E-02	-	2.66E-04	1.11E-03	5.33E-02	5.70E-05	1.18E+00
PERM	MJ	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	1.91E+00	1.65E-02	2.15E-02	-	2.66E-04	1.11E-03	5.33E-02	5.70E-05	1.18E+00
PEN-RE	MJ	2.69E+01	9.66E-01	2.74E-01	-	4.28E-02	6.99E-02	3.27E-01	2.63E-03	-1.23E+01
PENRM	MJ	2.82E-02	9.16E-02	6.92E-03	-	4.29E-03	6.64E-03	2.03E-02	2.64E-04	-1.36E-03
PENRT	MJ	2.69E+01	1.06E+00	2.81E-01	-	4.70E-02	7.66E-02	3.47E-01	2.89E-03	-1.23E+01
SM	MJ	8.64E-02	1.16E-03	1.18E-03	-	2.72E-05	7.66E-05	9.79E-01	2.29E-06	8.69E-01
RSF	MJ	9.48E-04	3.13E-04	6.91E-04	-	3.00E-06	1.87E-05	6.97E-04	8.88E-07	6.35E-04
NRSF	MJ	3.89E-03	6.15E-04	2.40E-03	-	8.10E-06	3.88E-05	8.01E-04	6.83E-07	5.66E-04
FW	m3	6.61E-03	1.28E-04	5.78E-04	-	2.52E-06	1.02E-05	1.62E-04	3.29E-06	5.65E-04

ENVIRONMENTAL INFORMATION DESCRIBING WASTE CATEGORIES

HWD	kg	3.70E-02	9.92E-04	7.14E-04	-	3.91E-05	7.18E-05	1.49E-03	1.47E-06	4.26E-03
NHWD	kg	2.52E-02	5.12E-02	1.45E-02	-	2.90E-05	6.59E-03	8.91E-03	1.99E-02	-2.60E-02
RWD	kg	4.21E-04	3.45E-07	1.65E-07	-	5.12E-09	2.32E-08	6.96E-07	6.21E-10	2.89E-04
CRU	kg	6.40E-23	-4.04E-23	1.63E-23	-	-3.59E-25	-1.45E-24	9.64E-24	-3.08E-25	-5.41E-23
MFR	kg	1.46E-02	1.05E-03	1.22E-03	-	2.24E-05	6.60E-05	1.45E-03	2.05E-06	-5.85E-03
MER	kg	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EEE	MJ	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
EET	MJ	0.00E+00	0.00E+00	0.00E+00	-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

**In order to convert LCA analysis results for individual steel sheet thicknesses, the following multipliers should be used:
o For modules A1, A2, C2, C3, C4 and D – multiplier corresponding to the weight [kg] of 1 m² of a given sheet thickness;
o For A3 and C1 modules – constant multiplier equal to 6.68 .*



7. REFERENCES

- EN 15804:2012+A2:2019 Sustainability of construction works -- Environmental product declarations -- Core rules for the product category of construction products;
- ISO 14025:2010 Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures
- ISO 14044:2009 Environmental management -- Life cycle assessment -- Requirements and guidelines
- EN 15942:2012 Sustainability of construction works -- Environmental product declarations -- Communication format business-to-business
- ISO 14067:2018 Greenhouse gases -- Carbon footprint of products -- Requirements and guidelines for quantification
- ISO 21930:2017 Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services
- Ecoinvent 3.9 database



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CERTIFICATE No. 2024-0054-2

of TYPE III ENVIRONMENTAL DECLARATION

Product:

Profiled steel elements:

- trapezoidal sheets
- metal roof tiles
- wall cassettes
- cold-headed construction profiles

Manufacturer:

PRUSZYŃSKI Sp. z o.o.
ul. Sokołowska 32B, Sokołów
05-806 Komorów
NIP: 534-21-39-235

confirms the correctness of the data included in the development of the Type III Environmental Declaration and accordance with the requirements of the standard:

EN 15804:2012+A2:2019

Sustainability of construction works --
Environmental product declarations --
Core rules for the product category of construction products

This certificate, issued for the first time on 07/08/2024 and is valid for 5 years or until amendment of mentioned Environmental Declaration .



**Director of the Certification
Department
CERTBUD Sp. z o.o.**

Kamil PAWŁOWSKI

Warsaw, 07/08/2024 r.