

EPD

ENVIRONMENTAL
PRODUCT DECLARATION

SAFETY BARRIERS AND GUARDRAIL

Environmental Product Declaration
in accordance with UNI EN ISO 14025
and UNI EN 15804:2012+A2:2019.



DECLARATION NUMBER

S-P-06526

PRODUCT CATEGORY RULES

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PROGRAMME

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MARCEGAGLIA
BUILDTECH

Our steel, your life

Sustainability objectives such as respect for the environment and the protection of its workers have always been priorities, and Marcegaglia has been committed over the years to promoting constant innovation in the context of *production efficiency*, in the *safety of its facilities*, and *environmental protection*. These objectives are pursued by adopting the *best technologies* available, investing in *R&D*, ongoing training, and the close *involvement of its collaborators*, thereby tracing a strategic path towards an *increasing awareness of sustainability* which permeates all of the group's activities, in order to strengthen its "green" spirit and maximize its positive impact on employees, the community, and the environment.



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1. THE COMPANY

Marcegaglia Buildtech is a part of the **Marcegaglia Group**, a leader in the European and world steel processing sector. A **unique business and manufacturing model**, a typical expression of Italian family entrepreneurship, capable of combining its operational capacity with a significant presence in the international market alongside multinationals.

Marcegaglia Buildtech is a company which manufactures a **wide range of construction products**, as well as **scaffolding systems** for the **civil and industrial** building sector by processing **semi-finished** or **finished steel products**: these elements include safety barriers and guardrails.

2. THE PRODUCT

Starting from the **semi-finished steel products of guaranteed quality**, subsequently **hot dip galvanized or pre-painted, safety barriers and guardrails** are created, certified by experimental tests, and developed in compliance with the specific regulations of the reference markets.

There are several configurations that include safety barriers and guardrails for roads and highways, in steel with containment levels N2, H1, H2, H3, H4B, for side edge, bridge edge and traffic divider - as well as New Jersey steel.

The complete range of road and highway devices - guardrails and barriers - includes:

- **safety barriers for lateral edge on embankment;**
- **bridge edge guardrail;**
- **traffic divider safety barriers;**
- **integrated safety noise barriers.**

From the company website marcegagliabuildtech.it it is possible to consult the product catalogs within which the technical characteristics of the same are described in an exhaustive manner.

The parameters listed below are specified for each element contained in this study:

- **Containment level (eg: T1, N1, H1 etc.);**
- **Impact severity level (eg: A, B, C);**
- **Operating width level (eg: W1, W2 etc.);**
- **Vehicle intrusion class (eg: Vi2, Vi4, Vi8 etc.);**
- **Normalized dynamic deflection (expressed in meters).**

Furthermore, it is specified that the corten steel road barriers are made up of 100% steel while the galvanized ones are composed of 96% steel and 4% zinc used for the respective coating.

SINGLE SIDED BARRIERS FOR GROUND

CORTEN STEEL BARRIER



BARRIER	CONTAINMENT LEVEL	IMPACT SEVERITY LEVEL	OPERATING WIDTH LEVEL	VEHICLE INTRUSION CLASS	NORMALIZED DYNAMIC DEFLECTION
N2W4_2013_CORTEN	N2	A	W4	Vi4	1,1
N2W2_2014_CORTEN	N2	A	W2	Vi2	0,7
H1W3_2013_CORTEN	H1	A	W3	Vi4	0,8
H2W4_2014_CORTEN	H2	A	W4	Vi5	1,2
H2BLW4_2020_CORTEN	H2	A	W4	Vi4	1,2



SINGLE SIDED BARRIERS FOR GROUND



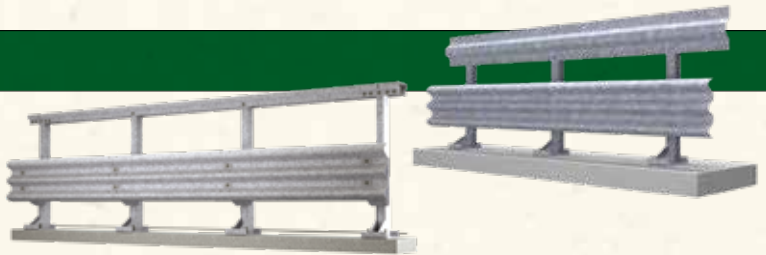
BARRIER	CONTAINMENT LEVEL	IMPACT SEVERITY LEVEL	OPERATING WIDTH LEVEL	VEHICLE INTRUSION CLASS	NORMALIZED DYNAMIC DEFLECTION
N2W4_2013-1	N2	A	W4	Vi4	1,1
N2_MAR_2009	N2	A	W7	Vi7	2,4
N2W2_2014	N2	A	W2	Vi2	0,7
H1BLW3_MARC_2013-1	H1	A	W3	Vi4	0,8
H1BLDX_MAR	H1	A	W5	Vi4	1,2
H2BLW5_MARC_2014	H2	A	W5	Vi5	1,5
H2BL_W5_MAR_2013-1	H2	A	W5	Vi5	1,5
H2BL2N_W4_2014	H2	A	W4	Vi5	1,2
H2BL3N_MARC2010	H2	A	W8	Vi9	3,4
H2BLDX2N_MAR	H2	A	W6	Vi8	1,8
H2BL3N_MARC_2011	H2	A	W5	Vi6	1,5
H2BLW5_MARC_2015	H2	A	W5	Vi5	1,5
H2BLW5_MARC_2017	H2	A	W5	Vi6	1,6
H2BL3NDX_MARC2009	H2	A	W6	Vi7	1,9
H2BLW4_MARC_2020	H2	A	W4	Vi4	1,2
H2BL3N_W3_MAR_2011	H2	A	W3	Vi6	0,9
H2BL-T1-2017AS_M1	H2	A	W5	Vi6	1,4
H2BL-2017AS_M1	H2	A	W4	Vi5	1,2
H2BL3N_MAR	H2	A	W4	Vi4	1,1
H2BL2N+2N_W2_2015	H2	B	W2	Vi2	0,7
H3BL_MAR_2009	H3	A	W8	Vi8	3
H3BL_MAR_W5_2013	H3	A	W5	Vi5	1,2
H3BL_MAR_2011	H3	A	W6	Vi8	1,7
H4BL_MAR_W5_2013	H4	A	W5	Vi6	1,4
H3BL_W6_A60_P1125	H3	A	W5	Vi6	1,4

BARRIERS FOR BRIDGE

CORTEN STEEL BARRIER					
BARRIER	CONTAINMENT LEVEL	IMPACT SEVERITY LEVEL	OPERATING WIDTH LEVEL	VEHICLE INTRUSION CLASS	NORMALIZED DYNAMIC DEFLECTION
H2BPW4_MARC_2020_C	H2	B	W4	Vi5	1,2
H2BPW4_MARC_2021_C	H2	B	W4	Vi5	0,9



GALVANIZED STEEL BARRIER					
BARRIER	CONTAINMENT LEVEL	IMPACT SEVERITY LEVEL	OPERATING WIDTH LEVEL	VEHICLE INTRUSION CLASS	NORMALIZED DYNAMIC DEFLECTION
H2BPW4_MARC_2020	H2	B	W4	Vi5	1,2
H2BPW4_MARC_2021	H2	B	W4	Vi5	0,9
H2BP_MAR	H2	A	W5	Vi4	1,5
H2BP_MAR_2011	H2	B	W4	Vi4	1
H2BP_MAR_2011_WF	H2	B	W4	Vi4	1
H3BP_MAR_W5_2012	H3	B	W5	Vi6	1,4
H3BP_MAR_W4_2017	H3	B	W4	Vi4	0,7
H4BP_MAR_W3_2017	H4	B	W3	Vi6	0,7
NEWJERSEY_2800	H4	B	W5	Vi8	1,4
H4BP_MAR_W4_2012	H4	B	W4	Vi7	1
H4BP_MAR	H4	A	W5	Vi5	1



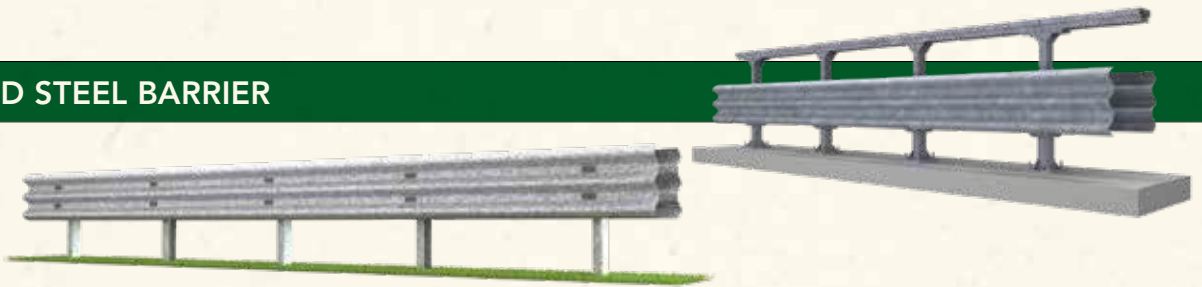
DOUBLE SIDED GUARDRAILS

CORTEN STEEL BARRIER



BARRIER	CONTAINMENT LEVEL	IMPACT SEVERITY LEVEL	OPERATING WIDTH LEVEL	VEHICLE INTRUSION CLASS	NORMALIZED DYNAMIC DEFLECTION
H2SPT_W4_CORTEN	H2	B	W4	Vi5	1,2

GALVANIZED STEEL BARRIER



BARRIER	CONTAINMENT LEVEL	IMPACT SEVERITY LEVEL	OPERATING WIDTH LEVEL	VEHICLE INTRUSION CLASS	NORMALIZED DYNAMIC DEFLECTION
H2SPT_W4_2013-1	H2	B	W4	Vi5	1,2
H2SPT_W5_MAR_2011	H2	A	W5	Vi6	1,5
H2SPT_MAR	H2	A	W6	1,9	1,8
H4SPT_W5_2013	H4	A	W5	Vi6	1,2
H4SPT_W4_2015_P	H4	A	W4	Vi6	0,8



SPECIAL COMPONENT AND ACCESSORIES

TERMINAL FOR SAFETY BARRIERS P4



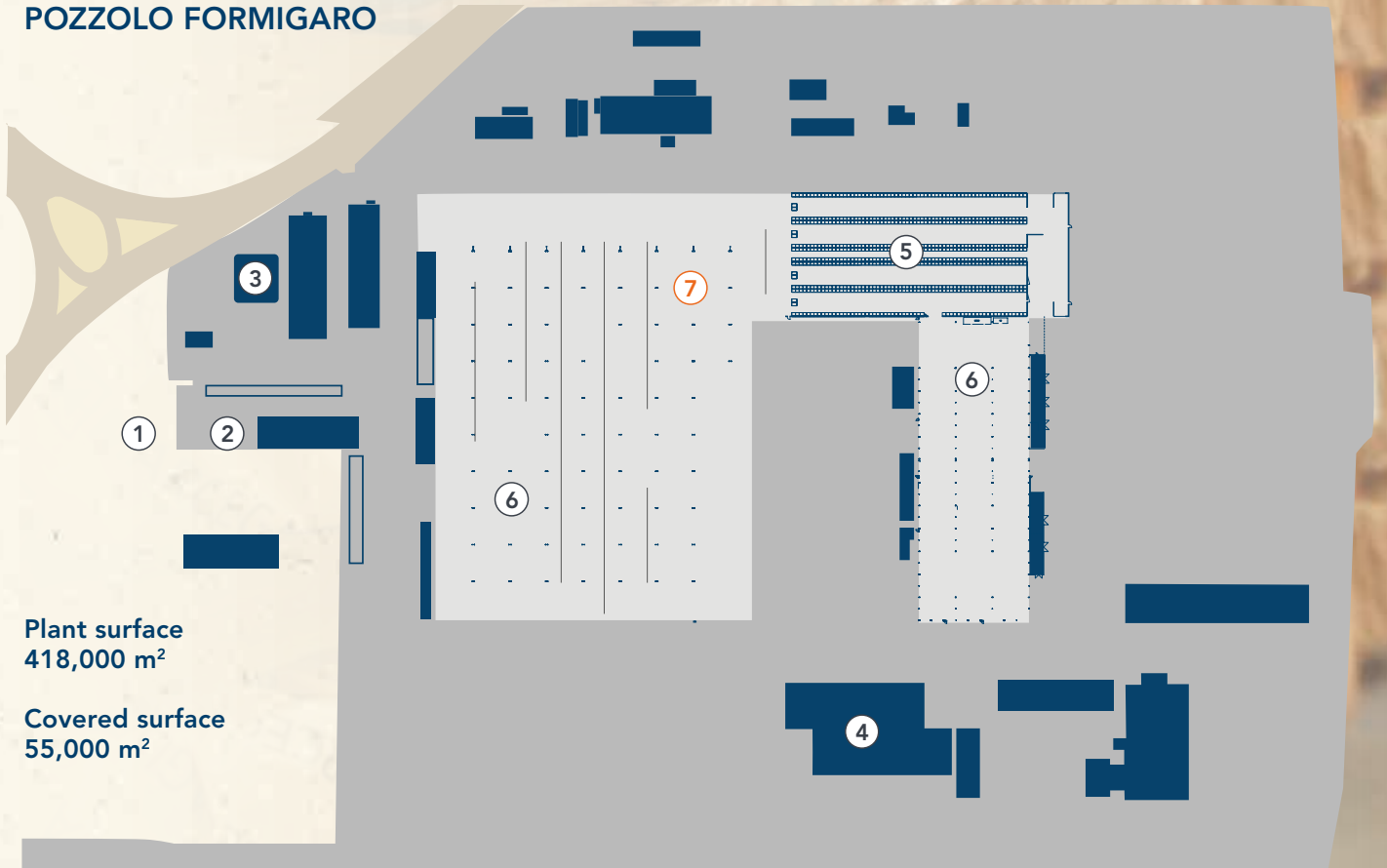
COMPONENT	CONTAINMENT LEVEL	IMPACT SEVERITY LEVEL	OPERATING WIDTH LEVEL	VEHICLE INTRUSION CLASS
TERMINAL	P4	B	W4	X1 e Y2



3. THE PRODUCTION SITE

The main components of Marcegaglia Buildtech steel safety barriers and guardrails are manufactured in the **Pozzolo Formigaro (Alessandria) plant**, which houses the latest production technologies to ensure the best product performance, covering an area of **418,000 square meters**, 55,000 of which are covered.

POZZOLO FORMIGARO



Plant surface
418,000 m²

Covered surface
55,000 m²

- ① Entrance
- ② Offices
- ③ Utilities
- ④ Main storage
- ⑤ Coils storage
- ⑥ Panels and corrugated sheets production area
- ⑦ Safety barriers production area

4. PLANT CERTIFICATION

Marcegaglia Buildtech, in accordance with its **Policy for the Protection of the Health and Safety of Workers and the Environment**, has implemented and maintains an active **Quality Management System** that meets the requirements of UNI EN ISO 9001:2015 (certificate no. 12370/05/S - expiry 22/05/2025), an **Environmental management policy** complying with the requirements of UNI EN ISO 14001:2015 (certificate no. EMS-7290/S - expiry 25/07/2024), an **Health and safety management system** meeting the requirements of UNI ISO 45001:2018 (certificate no. OHS-260 - expiry 25/09/2025) and a **Social responsibility management system** compliant with the requirements of the standard SA 8000:2014 (certificate n° SA-2040 – valid until 04/04/2025).

SYSTEM CERTIFICATIONS

						
QUALITY MANAGEMENT SYSTEM	ENVIRONMENTAL MANAGEMENT SYSTEM	ENVIRONMENTAL MANAGEMENT SYSTEM	HEALTH AND SAFETY MANAGEMENT SYSTEM	HEALTH AND SAFETY MANAGEMENT SYSTEM	WORKER HEALTH / SAFETY AND ENVIRONMENT POLICY	SOCIAL RESPONSIBILITY MANAGEMENT SYSTEM
RINA	RINA	IQNET	RINA	IQNET		RINA
ISO 9001:2015	ISO 14001:2015	ISO 14001:2015	ISO 45001:2018	ISO 45001:2018		SA 8000:2014

The company's management systems are a testimony to the **corporate commitment** to continuously **improving** its performance with regards to the environment and safety, for example in the way it manages hazardous substances and the waste produced from its activities. In the context of the environmental management policy, there is also an appropriate data management procedure to **study product life cycles**. The company has **new improvement objectives** aimed at increasing their performance year on year.



5.THE PROCESS

The **production cycle** begins with the arrival of the **raw materials** in the company by road. The raw materials consist of **coils, strips** and **sheets** arriving mainly from the other companies of the Marcegaglia group. After arriving at the factory, the raw materials are **processed** by the respective plants to obtain the various components that make up the **road safety barrier** or its accessory **component**.

The **strips** are partly delivered to the **poles** and **bands profiling lines** and partly to the presses to produce **auxiliary parts** (some components are sent directly to the storage areas).

At the end of this part of the production cycle, all the elements that make up the road safety barrier destined for storage are obtained.

• PROFILES FOR POSTS AND CURRENT

The **profiles** are produced on profiling lines complete with an automatic unloading section. The initial section consists of the unwinder on which the sheet coil is loaded, to be unrolled and feed the line itself. Downstream of the loading area there is a bench for leveling which, by pressing on the incoming sheet metal, eliminates any bends or undulations present. This is followed by the butting area and the actual welding. The semi-finished product then passes to the punching machine where the holes and slots that will be used in the assembly phase of the guardrail are made. The transfer from the punching area to the profile forming area takes place by means of a roller path. The profiling takes place by passing the sheet metal strip through the forming rollers which create the open profile of different shapes and sizes. To avoid excessive overheating due to friction of the material during processing, a coolant emulsion is used. Once the desired shape and size of the section has been obtained, the profile is cut to size in a special guillotine shear. The cut profile then reaches the roller path which transports it to the automatic unloading and packing area. This last operation consists in the manual strapping of the bundles of profiles. The packs are then placed in the finished product storage area by forklift.

• WAVES

The activity consists in the production of guardrail **waves beam** starting from the strips that are transported to the entrance to the profiling line.

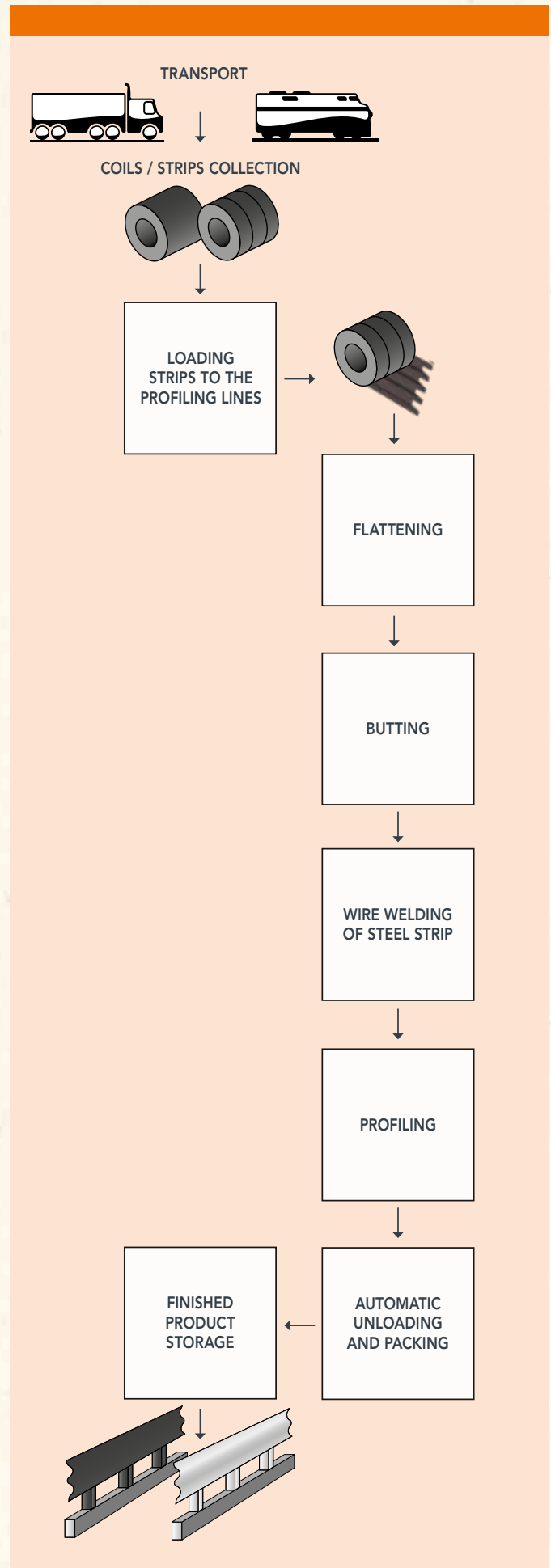
- **SPACER**

There is a line to produce a particular element of road safety barriers called **spacer**.

The raw material used is essentially constituted by steel **sheet** in strips of the required width. The initial section consists of the decoiler, or the rotating support on which the sheet coil is loaded, to be unrolled and feed the line itself. The machine unwinds the strip, which is subsequently stretched through a compact roller nerveer. A battery of hydraulically operated molds carries out all the drilling according to drawing. Subsequently, a second station carries out the first shaping with subsequent wrapping of the remaining sheet around a core. Finally, automatically, the welding is carried out on the produced.

- **ASSEMBLY**

The **assembly** of the road barrier does not take place in the company but directly at the place of use. The pieces produced are stored in the warehouse or in the external area waiting to be sent to external plants for galvanizing.



6. THE METHODOLOGY

The functional unit of the system considered is the **linear meter of the safety barrier**.

The information on the useful life of hot-dip galvanized steel used in the structural field is described in the UNI EN ISO 14713 standard. The expected duration in relation to the atmospheric environment in which the road safety barrier is located corresponds to the information contained in the UNI EN standard. ISO 1461:2009. However, the actual duration may vary in extremely corrosive locations and / or in particular environmental conditions (e.g. very maritime atmosphere or damage caused by sand abrasion).

To collect, analyze and monitor performance, **SimaPro** rel. 9.5. **software** has been used.

The data used is representative of the **year 2022** and were provided by the company (**primary data**).

Secondary data, on the other hand, comes from the Ecoinvent database (Ref.: database v.3.9.1, January 2023). The study is "from cradle to gate with options (A1-A3 + A4-A5 + C1-C4 + D)" (reference: c-PCR-010 (TO PCR 2019: 14) "GUARDRAILS AND BRIDGE PARAPETS" version: 2021 -04-23), valid until 20/12/2024.

Modules A1-A3 include material procurement processes (raw and auxiliary materials) as well as manufacturing processes.

Module A4 considers the distribution of the finished product on the installation site: the places where the barriers are delivered are not fixed but vary according to market demands. As a result, a generic transport distance of 300 km is considered.

Form A5 considers the installation of the finished product at the place of delivery. For the assembly of the barriers, the use of the pneumatic pile driver for driving the poles into the ground is considered as well as the use of the pneumatic drill for drilling the concrete, the latter necessary for anchoring the poles in the case of bridge barriers.

Modules C1-C4 consider the uninstallation, transport, sorting and disposal of components deriving from the end-of-life operations of road barriers. These operations are not directly controllable by the company: in this regard, literature data relating to the construction sector are therefore used, considering an average distance of 300 km to transport the item from the place where it was discarded to the sorting center. Furthermore, a percentage equal to 1% of the steel is considered not destined for recovery operations but is sent to landfill.

Module D considers the recovery and recycling potential of steel deriving from end-of-life processes: the calculation of the environmental benefits deriving from steel recovery is based on the indications provided in the document "Product Category Rules for Type III environmental product declaration of construction products to EN 15804: 2012 - Par. 6.3.4.6. Benefits and loads beyond the product system boundary, information Module D".

LEGEND: X = Module considered, ND = Module not declared, GLO = Global, IT = Italy

		MODULE	Modules declared	Geography	Specific data	Variations product	Variation site
PRODUCT STAGE	Raw material supply	A1	X	GLO	>90%	Not relevant	Not relevant
	Transport	A2	X	IT	>90%	Not relevant	Not relevant
	Manufacturing	A3	X	IT	>90%	Not relevant	Not relevant
CONSTRUCTION PROCESS STAGE	Transport	A4	X	IT	>90%	Not relevant	Not relevant
	Construction installation	A5	X	IT	>90%	Not relevant	Not relevant
USE STAGE	Use	B1	ND	-	-	-	-
	Maintenance	B2	ND	-	-	-	-
	Repair	B3	ND	-	-	-	-
	Replacement	B4	ND	-	-	-	-
	Refurbishment	B5	ND	-	-	-	-
	Operational energy use	B6	ND	-	-	-	-
	Operational water use	B7	ND	-	-	-	-
END OF LIFE STAGE	De-construction demolition	C1	X	GLO	-	-	-
	Transport	C2	X	GLO	-	-	-
	Waste processing	C3	X	GLO	-	-	-
	Disposal	C4	X	GLO	-	-	-
FRESOURCE RECOVERY STAGE	Reuse, recovery, recycling potential	D	X	IT	-	-	-





7. POTENTIAL ENVIRONMENTAL IMPACTS

The production activities carried out at **Marcegaglia** plants involve atmospheric emissions typical of steel processing. Monitoring programs for air quality, healthiness of working environments and individual emission points are active in compliance with the requirements of the authorization acts issued by the territorially competent Authorities.

Regardless of the type of barrier considered, the element that has the greatest impact is the **steel** purchased due to the composition of the various elements that make up the road safety system.

The impacts of energy consumption for the profiling of poles and bands as well as the impact of the galvanizing process are marginal compared to the impact associated with the supply of raw material.

The impact categories are:

- **global warming**: the increase of the average temperature of the surface of the Earth, attributed in large part to increasing quantities of atmospheric emissions of greenhouse gases;
- the **distribution of the ozone layer**, linked to the agents issued by human activity, primarily chlorine and bromine;
- **photochemical oxidation**, a complex mixture of atmospheric pollutants consisting of ozone and other oxidizing chemical substances, nitrogen dioxide (NO₂) and fine particles;
- **atmospheric acidification**: acid rain, due to emissions derived from the use of fossil fuels;
- the **eutrophication of water**: an excess increase in plant organisms in aquatic ecosystems;
- the **depletion of abiotic fossil resources and otherwise**.

IMPACT CATEGORY	ABB.	UNIT
Climate change - total	GWP - t	kg CO ₂ eq
Climate change - Fossil	GWP - fossil	kg CO ₂ eq
Climate change - Biogenic	GWP - biogenic	kg CO ₂ eq
Climate change - Land use and LU change	GWP - luluc	kg CO ₂ eq
Climate change - Greenhouse Gases	GWP - GHG	kg CO ₂ eq
Ozone depletion	ODP	kg CFC11 eq
Photochemical ozone formation	POCP	kg NMVOC eq
Acidification of land and water	AP	mol H+ eq
Eutrophication	EP - freshwater EP - marine EP - terrestrial	kg P eq kg N eq mol N eq
Water use	WDP	m ³ depriv.
Resource use, fossils	ADP - F	MJ
Resource use, minerals and metals	ADP - MM	kg Sb eq





8. RESOURCE USE

The resources used to transform steel products have always been a priority for Marcegaglia.

The company has carried out and periodically updates an **Energy Diagnosis** of its site to identify the most relevant systems in terms of energy as well as define opportunities for improvement in order to reduce the energy consumption determined by carrying out its business over time.

The company has implemented an energy management system in accordance with the UNI CEI EN ISO 50001:2018 standard (soon to be certified) to identify the most relevant facilities in terms of energy as well as to define opportunities for improvement in order to reduce the energy consumption determined by the conduct of its business over time.

The impacts of **energy consumption** for the profiling of poles and bands as well as the impact of the galvanizing process are marginal compared to the impact associated with the supply of raw material.

The amount of energy resources used shall be taken into account in calculating the **resources used** (from renewable and non-renewable sources), the **depletion of fossil fuels** and the volume of **fresh water taken**.

IMPACT CATEGORY	ABB.	UNIT
Use of renewable primary energy excluding renewable primary energy resources used as raw materials	PERE	MJ
Use of renewable primary energy resources used as raw materials	PERM	MJ
Total use of renewable primary energy resources (primary energy and primary energy resources used as raw materials)	PERT	MJ
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials	PENRE	MJ
Use of non-renewable primary energy resources used as raw materials	PENRM	MJ
Total use of non-renewable primary energy resources (primary energy and primary energy resources used as raw materials)	PENRT	MJ
Use of secondary material	SM	kg
Use of renewable secondary fuels	RSF	MJ
Use of non-renewable secondary fuels	NRSF	MJ
Use of net fresh water	FW	m ³





9. WASTE PRODUCTION

In this analysis, the generation of waste is examined, subdividing it into three categories: **hazardous**, **non-hazardous** and **radioactive waste**.

IMPACT CATEGORY	ABB.	UNIT
Hazardous waste disposed	HW	kg
Non-hazardous waste disposed	NHW	kg
Radioactive waste disposed	RW	kg



10. OUTPUT FLOWS

IMPACT CATEGORY	ABB.	UNIT
Reuse	REUSE	kg
Materials for recycling	RECYCLE	kg
Materials for energy recovery	EN-REC	kg
Exported energy - electricity	EE-E	MJ
Exported energy - thermal energy	EE-T	MJ

SINGLE SIDED BARRIERS FOR GROUND

CORTEN STEEL BARRIER

N2W4_2013

ABB.	UNIT	A1 - A3	A	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	2,89E+01	6,80E-01	4,91E-01	5,25E-02	6,80E-01	1,87E-01	7,32E-04	-1,78E+01
GWP - fossil	kg CO ₂ eq	3,06E+01	6,79E-01	4,82E-01	5,25E-02	6,79E-01	1,87E-01	7,31E-04	-1,78E+01
GWP - biogenic	kg CO ₂ eq	-1,65E+00	6,14E-04	8,58E-03	1,21E-05	6,14E-04	-6,52E-05	4,19E-07	-3,79E-02
GWP - luluc	kg CO ₂ eq	2,04E-02	3,30E-04	1,01E-03	5,91E-06	3,30E-04	2,32E-05	4,41E-07	-1,18E-02
GWP - GHG	kg CO ₂ eq	3,08E+01	6,81E-01	4,85E-01	5,26E-02	6,81E-01	1,88E-01	7,34E-04	-1,78E+01
ODP	kg CFC-11 eq	1,02E-06	1,48E-08	8,54E-09	8,35E-10	1,48E-08	4,01E-09	2,12E-11	-3,11E-07
POCP	kg NMVOC eq	1,24E-01	3,31E-03	2,13E-03	7,26E-04	3,31E-03	5,53E-04	7,89E-06	-8,46E-02
AP	mol H+ eq	1,26E-01	2,22E-03	6,14E-03	4,87E-04	2,22E-03	6,36E-04	5,51E-06	-8,03E-02
EP - freshwater	kg P eq	9,52E-03	4,75E-05	6,03E-04	1,61E-06	4,75E-05	2,57E-05	6,09E-08	-8,65E-03
EP - marine	kg N eq	3,05E-02	7,62E-04	6,09E-04	2,26E-04	7,62E-04	1,14E-04	2,11E-06	-1,84E-02
EP - terrestrial	mol N eq	3,22E-01	8,05E-03	6,69E-03	2,45E-03	8,05E-03	1,22E-03	2,27E-05	-1,87E-01
WDP	m ³ depriv.	8,60E+00	3,93E-02	1,55E-01	1,48E-03	3,93E-02	1,52E-02	8,05E-04	1,30E+00
ADP - F	MJ	3,01E+02	9,63E+00	8,16E+00	6,88E-01	9,63E+00	2,69E+00	1,82E-02	-1,88E+02
ADP - MM	kg Sb eq	1,97E-04	2,18E-06	6,15E-05	1,83E-08	2,18E-06	1,18E-07	1,02E-09	-1,28E-04
PERE	MJ	3,77E+01	1,89E-01	1,83E+00	4,77E-03	1,89E-01	2,41E-01	2,01E-04	-2,10E+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
PERT	MJ	3,77E+01	1,89E-01	1,83E+00	4,77E-03	1,89E-01	2,41E-01	2,01E-04	-2,10E+01
PENRE	MJ	3,46E+02	6,37E+00	7,17E+00	-1,77E+01	3,10E+00	2,68E+00	1,21E-02	-2,18E+02
PENRM	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
PENRT	MJ	3,46E+02	6,37E+00	7,17E+00	-1,77E+01	3,10E+00	2,68E+00	1,21E-02	-2,18E+02
SM	kg	3,67E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,54E-04	0,00E+00	-3,29E+00
RSF	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
NRSF	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
FW	m ³	1,80E-01	1,59E-03	4,14E-03	5,95E-05	1,59E-03	5,94E-04	1,94E-05	-2,08E-01
HW	kg	1,89E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,26E-04	0,00E+00	-1,31E-01
NHW	kg	2,07E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,47E-06	0,00E+00	-1,31E-02
RW	kg	3,71E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,10E-05	0,00E+00	-1,50E-03
REUSE	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
RECYCLE	kg	7,43E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,61E-04	0,00E+00	-9,04E+00
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

CORTEN STEEL BARRIER

N2W2_2014

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	3,70E+01	8,80E-01	4,91E-01	6,80E-02	8,80E-01	2,42E-01	9,47E-04	-2,30E+01
GWP - fossil	kg CO ₂ eq	3,92E+01	8,79E-01	4,82E-01	6,79E-02	8,79E-01	2,42E-01	9,45E-04	-2,30E+01
GWP - biogenic	kg CO ₂ eq	-2,18E+00	7,95E-04	8,58E-03	1,56E-05	7,95E-04	-8,43E-05	5,41E-07	-4,90E-02
GWP - luluc	kg CO ₂ eq	2,61E-02	4,27E-04	1,01E-03	7,65E-06	4,27E-04	3,00E-05	5,71E-07	-1,53E-02
GWP - GHG	kg CO ₂ eq	3,94E+01	8,81E-01	4,85E-01	6,81E-02	8,81E-01	2,43E-01	9,49E-04	-2,30E+01
ODP	kg CFC-11 eq	1,31E-06	1,91E-08	8,54E-09	1,08E-09	1,91E-08	5,19E-09	2,74E-11	-4,02E-07
POCP	kg NMVOC eq	1,59E-01	4,28E-03	2,13E-03	9,40E-04	4,28E-03	7,15E-04	1,02E-05	-1,09E-01
AP	mol H+ eq	1,61E-01	2,87E-03	6,14E-03	6,30E-04	2,87E-03	8,22E-04	7,13E-06	-1,04E-01
EP - freshwater	kg P eq	1,21E-02	6,15E-05	6,03E-04	2,09E-06	6,15E-05	3,32E-05	7,87E-08	-1,12E-02
EP - marine	kg N eq	3,90E-02	9,85E-04	6,09E-04	2,92E-04	9,85E-04	1,47E-04	2,74E-06	-2,38E-02
EP - terrestrial	mol N eq	4,12E-01	1,04E-02	6,69E-03	3,17E-03	1,04E-02	1,58E-03	2,93E-05	-2,42E-01
WDP	m ³ depriv.	1,11E+01	5,08E-02	1,55E-01	1,92E-03	5,08E-02	1,97E-02	1,04E-03	1,68E+00
ADP - F	MJ	3,85E+02	1,25E+01	8,16E+00	8,90E-01	1,25E+01	3,48E+00	2,36E-02	-2,43E+02
ADP - MM	kg Sb eq	2,51E-04	2,82E-06	6,15E-05	2,37E-08	2,82E-06	1,53E-07	1,31E-09	-1,65E-04
PERE	MJ	4,81E+01	2,44E-01	1,83E+00	6,16E-03	2,44E-01	3,12E-01	2,60E-04	-2,71E+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
PERT	MJ	4,81E+01	2,44E-01	1,83E+00	6,16E-03	2,44E-01	3,12E-01	2,60E-04	-2,71E+01
PENRE	MJ	4,42E+02	8,24E+00	7,17E+00	-2,29E+01	3,99E+00	3,46E+00	1,55E-02	-2,82E+02
PENRM	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
PENRT	MJ	4,42E+02	8,24E+00	7,17E+00	-2,29E+01	3,99E+00	3,46E+00	1,55E-02	-2,82E+02
SM	kg	4,69E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,58E-04	0,00E+00	-4,26E+00
RSF	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
NRSF	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
FW	m ³	2,23E-01	2,06E-03	4,14E-03	7,70E-05	2,06E-03	7,68E-04	2,51E-05	-2,68E-01
HW	kg	2,43E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,64E-04	0,00E+00	-1,69E-01
NHW	kg	2,65E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,37E-06	0,00E+00	-1,70E-02
RW	kg	4,78E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,71E-05	0,00E+00	-1,94E-03
REUSE	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
RECYCLE	kg	9,59E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,97E-04	0,00E+00	-1,17E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

CORTEN STEEL BARRIER

H1W3_2013

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	3,70E+01	8,80E-01	4,91E-01	6,80E-02	8,80E-01	2,42E-01	9,47E-04	-2,30E+01
GWP - fossil	kg CO ₂ eq	3,92E+01	8,79E-01	4,82E-01	6,79E-02	8,79E-01	2,42E-01	9,45E-04	-2,30E+01
GWP - biogenic	kg CO ₂ eq	-2,18E+00	7,95E-04	8,58E-03	1,56E-05	7,95E-04	-8,43E-05	5,41E-07	-4,90E-02
GWP - luluc	kg CO ₂ eq	2,61E-02	4,27E-04	1,01E-03	7,65E-06	4,27E-04	3,00E-05	5,71E-07	-1,53E-02
GWP - GHG	kg CO ₂ eq	3,94E+01	8,81E-01	4,85E-01	6,81E-02	8,81E-01	2,43E-01	9,49E-04	-2,30E+01
ODP	kg CFC-11 eq	1,31E-06	1,91E-08	8,54E-09	1,08E-09	1,91E-08	5,19E-09	2,74E-11	-4,02E-07
POCP	kg NMVOC eq	1,59E-01	4,28E-03	2,13E-03	9,40E-04	4,28E-03	7,15E-04	1,02E-05	-1,09E-01
AP	mol H+ eq	1,61E-01	2,87E-03	6,14E-03	6,30E-04	2,87E-03	8,22E-04	7,13E-06	-1,04E-01
EP - freshwater	kg P eq	1,21E-02	6,15E-05	6,03E-04	2,09E-06	6,15E-05	3,32E-05	7,87E-08	-1,12E-02
EP - marine	kg N eq	3,90E-02	9,85E-04	6,09E-04	2,92E-04	9,85E-04	1,47E-04	2,74E-06	-2,38E-02
EP - terrestrial	mol N eq	4,12E-01	1,04E-02	6,69E-03	3,17E-03	1,04E-02	1,58E-03	2,93E-05	-2,42E-01
WDP	m ³ depriv.	1,11E+01	5,08E-02	1,55E-01	1,92E-03	5,08E-02	1,97E-02	1,04E-03	1,68E+00
ADP - F	MJ	3,85E+02	1,25E+01	8,16E+00	8,90E-01	1,25E+01	3,48E+00	2,36E-02	-2,43E+02
ADP - MM	kg Sb eq	2,51E-04	2,82E-06	6,15E-05	2,37E-08	2,82E-06	1,53E-07	1,31E-09	-1,65E-04
PERE	MJ	4,81E+01	2,44E-01	1,83E+00	6,16E-03	2,44E-01	3,12E-01	2,60E-04	-2,71E+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
PERT	MJ	4,81E+01	2,44E-01	1,83E+00	6,16E-03	2,44E-01	3,12E-01	2,60E-04	-2,71E+01
PENRE	MJ	4,42E+02	8,24E+00	7,17E+00	-2,29E+01	3,99E+00	3,46E+00	1,55E-02	-2,82E+02
PENRM	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
PENRT	MJ	4,42E+02	8,24E+00	7,17E+00	-2,29E+01	3,99E+00	3,46E+00	1,55E-02	-2,82E+02
SM	kg	4,69E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,58E-04	0,00E+00	-4,26E+00
RSF	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
NRSF	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
FW	m ³	2,23E-01	2,06E-03	4,14E-03	7,70E-05	2,06E-03	7,68E-04	2,51E-05	-2,68E-01
HW	kg	2,43E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,64E-04	0,00E+00	-1,69E-01
NHW	kg	2,65E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,37E-06	0,00E+00	-1,70E-02
RW	kg	4,78E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,71E-05	0,00E+00	-1,94E-03
REUSE	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
RECYCLE	kg	9,59E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,97E-04	0,00E+00	-1,17E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

CORTEN STEEL BARRIER

H2W4_2014

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	5,00E+01	1,20E+00	4,37E-01	9,26E-02	1,20E+00	3,30E-01	1,29E-03	-3,14E+01
GWP - fossil	kg CO ₂ eq	5,30E+01	1,20E+00	4,28E-01	9,26E-02	1,20E+00	3,30E-01	1,29E-03	-3,13E+01
GWP - biogenic	kg CO ₂ eq	-3,08E+00	1,08E-03	7,63E-03	2,12E-05	1,08E-03	-1,15E-04	7,38E-07	-6,69E-02
GWP - luluc	kg CO ₂ eq	3,53E-02	5,81E-04	8,96E-04	1,04E-05	5,81E-04	4,08E-05	7,78E-07	-2,08E-02
GWP - GHG	kg CO ₂ eq	5,33E+01	1,20E+00	4,31E-01	9,27E-02	1,20E+00	3,31E-01	1,29E-03	-3,14E+01
ODP	kg CFC-11 eq	1,78E-06	2,61E-08	7,59E-09	1,47E-09	2,61E-08	7,07E-09	3,73E-11	-5,48E-07
POCP	kg NMVOC eq	2,15E-01	5,83E-03	1,90E-03	1,28E-03	5,83E-03	9,75E-04	1,39E-05	-1,49E-01
AP	mol H ⁺ eq	2,18E-01	3,90E-03	5,46E-03	8,58E-04	3,90E-03	1,12E-03	9,71E-06	-1,42E-01
EP - freshwater	kg P eq	1,63E-02	8,38E-05	5,36E-04	2,84E-06	8,38E-05	4,53E-05	1,07E-07	-1,53E-02
EP - marine	kg N eq	5,26E-02	1,34E-03	5,41E-04	3,98E-04	1,34E-03	2,01E-04	3,73E-06	-3,25E-02
EP - terrestrial	mol N eq	5,57E-01	1,42E-02	5,94E-03	4,32E-03	1,42E-02	2,15E-03	3,99E-05	-3,29E-01
WDP	m ³ depriv.	1,52E+01	6,92E-02	1,38E-01	2,61E-03	6,92E-02	2,68E-02	1,42E-03	2,29E+00
ADP - F	MJ	5,19E+02	1,70E+01	7,25E+00	1,21E+00	1,70E+01	4,74E+00	3,21E-02	-3,31E+02
ADP - MM	kg Sb eq	3,36E-04	3,84E-06	5,46E-05	3,23E-08	3,84E-06	2,08E-07	1,79E-09	-2,25E-04
PERE	MJ	6,48E+01	3,32E-01	1,63E+00	8,40E-03	3,32E-01	4,25E-01	3,54E-04	-3,70E+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
PERT	MJ	6,48E+01	3,32E-01	1,63E+00	8,40E-03	3,32E-01	4,25E-01	3,54E-04	-3,70E+01
PENRE	MJ	5,96E+02	1,12E+01	6,37E+00	-3,13E+01	5,38E+00	4,72E+00	2,11E-02	-3,85E+02
PENRM	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
PENRT	MJ	5,96E+02	1,12E+01	6,37E+00	-3,13E+01	5,38E+00	4,72E+00	2,11E-02	-3,85E+02
SM	kg	6,37E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,25E-04	0,00E+00	-5,81E+00
RSF	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
NRSF	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
FW	m ³	2,89E-01	2,81E-03	3,68E-03	1,05E-04	2,81E-03	1,05E-03	3,43E-05	-3,66E-01
HW	kg	3,32E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,23E-04	0,00E+00	-2,31E-01
NHW	kg	3,56E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,14E-05	0,00E+00	-2,32E-02
RW	kg	6,52E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,69E-05	0,00E+00	-2,65E-03
REUSE	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
RECYCLE	kg	1,31E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,13E-04	0,00E+00	-1,59E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

CORTEN STEEL BARRIER

H2BLW4_2020

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	6,62E+01	1,53E+00	4,37E-01	1,18E-01	1,53E+00	4,21E-01	1,64E-03	-4,00E+01
GWP - fossil	kg CO ₂ eq	6,94E+01	1,53E+00	4,28E-01	1,18E-01	1,53E+00	4,21E-01	1,64E-03	-3,99E+01
GWP - biogenic	kg CO ₂ eq	-3,25E+00	1,38E-03	7,63E-03	2,71E-05	1,38E-03	-1,46E-04	9,40E-07	-8,52E-02
GWP - luluc	kg CO ₂ eq	4,67E-02	7,41E-04	8,96E-04	1,33E-05	7,41E-04	5,21E-05	9,91E-07	-2,65E-02
GWP - GHG	kg CO ₂ eq	6,99E+01	1,53E+00	4,31E-01	1,18E-01	1,53E+00	4,22E-01	1,65E-03	-4,00E+01
ODP	kg CFC-11 eq	2,28E-06	3,32E-08	7,59E-09	1,88E-09	3,32E-08	9,01E-09	4,76E-11	-6,98E-07
POCP	kg NMVOC eq	2,80E-01	7,44E-03	1,90E-03	1,63E-03	7,44E-03	1,24E-03	1,77E-05	-1,90E-01
AP	mol H+ eq	2,87E-01	4,98E-03	5,46E-03	1,09E-03	4,98E-03	1,43E-03	1,24E-05	-1,81E-01
EP - freshwater	kg P eq	2,15E-02	1,07E-04	5,36E-04	3,62E-06	1,07E-04	5,77E-05	1,37E-07	-1,94E-02
EP - marine	kg N eq	6,94E-02	1,71E-03	5,41E-04	5,07E-04	1,71E-03	2,56E-04	4,75E-06	-4,13E-02
EP - terrestrial	mol N eq	7,31E-01	1,81E-02	5,94E-03	5,51E-03	1,81E-02	2,74E-03	5,09E-05	-4,20E-01
WDP	m ³ depriv.	1,86E+01	8,82E-02	1,38E-01	3,33E-03	8,82E-02	3,42E-02	1,81E-03	2,92E+00
ADP - F	MJ	6,85E+02	2,16E+01	7,25E+00	1,54E+00	2,16E+01	6,04E+00	4,09E-02	-4,22E+02
ADP - MM	kg Sb eq	4,90E-04	4,90E-06	5,46E-05	4,12E-08	4,90E-06	2,65E-07	2,28E-09	-2,87E-04
PERE	MJ	8,61E+01	4,24E-01	1,63E+00	1,07E-02	4,24E-01	5,41E-01	4,51E-04	-4,72E+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
PERT	MJ	8,61E+01	4,24E-01	1,63E+00	1,07E-02	4,24E-01	5,41E-01	4,51E-04	-4,72E+01
PENRE	MJ	7,84E+02	1,43E+01	6,37E+00	-3,98E+01	3,97E+00	6,01E+00	2,68E-02	-4,91E+02
PENRM	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
PENRT	MJ	7,84E+02	1,43E+01	6,37E+00	-3,98E+01	3,97E+00	6,01E+00	2,68E-02	-4,91E+02
SM	kg	7,94E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,96E-04	0,00E+00	-7,40E+00
RSF	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
NRSF	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
FW	m ³	4,42E-01	3,58E-03	3,68E-03	1,34E-04	3,58E-03	1,33E-03	4,37E-05	-4,66E-01
HW	kg	4,45E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,84E-04	0,00E+00	-2,94E-01
NHW	kg	5,66E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,45E-05	0,00E+00	-2,95E-02
RW	kg	8,66E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,71E-05	0,00E+00	-3,38E-03
REUSE	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
RECYCLE	kg	1,76E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,04E-03	0,00E+00	-2,03E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

N2W4_2013-1

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	3,18E+01	7,07E-01	4,91E-01	5,46E-02	7,07E-01	1,95E-01	7,60E-04	-1,85E+01
GWP - fossil	kg CO ₂ eq	3,33E+01	7,06E-01	4,82E-01	5,45E-02	7,06E-01	1,95E-01	7,59E-04	-1,84E+01
GWP - biogenic	kg CO ₂ eq	-1,60E+00	6,38E-04	8,58E-03	1,25E-05	6,38E-04	-6,77E-05	4,35E-07	-3,94E-02
GWP - luluc	kg CO ₂ eq	2,23E-02	3,43E-04	1,01E-03	6,14E-06	3,43E-04	2,41E-05	4,58E-07	-1,23E-02
GWP - GHG	kg CO ₂ eq	3,36E+01	7,08E-01	4,85E-01	5,46E-02	7,08E-01	1,95E-01	7,62E-04	-1,85E+01
ODP	kg CFC-11 eq	1,09E-06	1,54E-08	8,54E-09	8,67E-10	1,54E-08	4,17E-09	2,20E-11	-3,23E-07
POCP	kg NMVOC eq	1,36E-01	3,44E-03	2,13E-03	7,54E-04	3,44E-03	5,74E-04	8,19E-06	-8,79E-02
AP	mol H ⁺ eq	1,37E-01	2,30E-03	6,14E-03	5,05E-04	2,30E-03	6,60E-04	5,72E-06	-8,35E-02
EP - freshwater	kg P eq	1,03E-02	4,94E-05	6,03E-04	1,67E-06	4,94E-05	2,67E-05	6,32E-08	-8,99E-03
EP - marine	kg N eq	3,34E-02	7,91E-04	6,09E-04	2,34E-04	7,91E-04	1,18E-04	2,20E-06	-1,91E-02
EP - terrestrial	mol N eq	3,50E-01	8,36E-03	6,69E-03	2,55E-03	8,36E-03	1,27E-03	2,35E-05	-1,94E-01
WDP	m ³ depriv.	9,23E+00	4,08E-02	1,55E-01	1,54E-03	4,08E-02	1,58E-02	8,36E-04	1,35E+00
ADP - F	MJ	3,35E+02	1,00E+01	8,16E+00	7,14E-01	1,00E+01	2,79E+00	1,89E-02	-1,95E+02
ADP - MM	kg Sb eq	2,14E-04	2,27E-06	6,15E-05	1,90E-08	2,27E-06	1,22E-07	1,05E-09	-1,33E-04
PERE	MJ	3,37E+01	1,57E-01	1,45E+00	4,12E-03	1,57E-01	1,05E-01	1,63E-04	-1,82E+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
PERT	MJ	3,37E+01	1,57E-01	1,45E+00	4,12E-03	1,57E-01	1,05E-01	1,63E-04	-1,82E+01
PENRE	MJ	3,78E+02	6,66E+00	7,17E+00	-3,19E+00	1,04E+01	2,82E+00	2,29E-01	-2,27E+02
PENRM	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
PENRT	MJ	3,78E+02	6,66E+00	7,17E+00	-3,19E+00	1,04E+01	2,82E+00	2,29E-01	-2,27E+02
SM	kg	4,04E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,68E-04	0,00E+00	-3,42E+00
RSF	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
NRSF	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
FW	m ³	2,11E-01	1,66E-03	4,14E-03	6,18E-05	1,66E-03	6,17E-04	2,02E-05	-2,16E-01
HW	kg	1,98E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,31E-04	0,00E+00	-1,36E-01
NHW	kg	2,18E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,72E-06	0,00E+00	-1,37E-02
RW	kg	3,90E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,18E-05	0,00E+00	-1,56E-03
REUSE	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
RECYCLE	kg	7,78E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,79E-04	0,00E+00	-9,39E+00
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

N2_MAR_2009

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	3,23E+01	7,21E-01	4,37E-01	5,56E-02	7,21E-01	1,98E-01	7,75E-04	-1,89E+01
GWP - fossil	kg CO ₂ eq	3,39E+01	7,20E-01	4,28E-01	5,56E-02	7,20E-01	1,99E-01	7,74E-04	-1,88E+01
GWP - biogenic	kg CO ₂ eq	-1,64E+00	6,51E-04	7,63E-03	1,28E-05	6,51E-04	-6,91E-05	4,43E-07	-4,02E-02
GWP - luluc	kg CO ₂ eq	2,26E-02	3,50E-04	8,96E-04	6,26E-06	3,50E-04	2,45E-05	4,67E-07	-1,25E-02
GWP - GHG	kg CO ₂ eq	3,42E+01	7,22E-01	4,31E-01	5,57E-02	7,22E-01	1,99E-01	7,77E-04	-1,89E+01
ODP	kg CFC-11 eq	1,11E-06	1,57E-08	7,59E-09	8,85E-10	1,57E-08	4,25E-09	2,24E-11	-3,29E-07
POCP	kg NMVOC eq	1,38E-01	3,51E-03	1,90E-03	7,69E-04	3,51E-03	5,86E-04	8,35E-06	-8,97E-02
AP	mol H ⁺ eq	1,39E-01	2,35E-03	5,46E-03	5,16E-04	2,35E-03	6,73E-04	5,83E-06	-8,51E-02
EP - freshwater	kg P eq	1,05E-02	5,04E-05	5,36E-04	1,71E-06	5,04E-05	2,72E-05	6,45E-08	-9,17E-03
EP - marine	kg N eq	3,40E-02	8,07E-04	5,41E-04	2,39E-04	8,07E-04	1,21E-04	2,24E-06	-1,95E-02
EP - terrestrial	mol N eq	3,57E-01	8,53E-03	5,94E-03	2,60E-03	8,53E-03	1,29E-03	2,40E-05	-1,98E-01
WDP	m ³ depriv.	9,42E+00	4,16E-02	1,38E-01	1,57E-03	4,16E-02	1,61E-02	8,52E-04	1,38E+00
ADP - F	MJ	3,40E+02	1,02E+01	7,25E+00	7,28E-01	1,02E+01	2,85E+00	1,93E-02	-1,99E+02
ADP - MM	kg Sb eq	2,17E-04	2,31E-06	5,46E-05	1,94E-08	2,31E-06	1,25E-07	1,08E-09	-1,35E-04
PERE	MJ	4,19E+01	2,00E-01	1,63E+00	5,05E-03	2,00E-01	2,55E-01	2,13E-04	-2,22E+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
PERT	MJ	4,19E+01	2,00E-01	1,63E+00	5,05E-03	2,00E-01	2,55E-01	2,13E-04	-2,22E+01
PENRE	MJ	3,84E+02	6,75E+00	6,37E+00	-1,88E+01	3,22E+00	2,83E+00	1,27E-02	-2,31E+02
PENRM	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
PENRT	MJ	3,84E+02	6,75E+00	6,37E+00	-1,88E+01	3,22E+00	2,83E+00	1,27E-02	-2,31E+02
SM	kg	4,12E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,75E-04	0,00E+00	-3,49E+00
RSF	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
NRSF	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
FW	m ³	2,13E-01	1,69E-03	3,68E-03	6,30E-05	1,69E-03	6,29E-04	2,06E-05	-2,20E-01
HW	kg	2,01E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,34E-04	0,00E+00	-1,39E-01
NHW	kg	2,21E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,86E-06	0,00E+00	-1,39E-02
RW	kg	3,97E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,22E-05	0,00E+00	-1,59E-03
REUSE	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
RECYCLE	kg	7,93E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,88E-04	0,00E+00	-9,58E+00
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

N2W2_2014

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	4,03E+01	9,14E-01	4,91E-01	7,06E-02	9,14E-01	2,52E-01	9,83E-04	-2,39E+01
GWP - fossil	kg CO ₂ eq	4,25E+01	9,13E-01	4,82E-01	7,06E-02	9,13E-01	2,52E-01	9,82E-04	-2,39E+01
GWP - biogenic	kg CO ₂ eq	-2,16E+00	8,26E-04	8,58E-03	1,62E-05	8,26E-04	-8,76E-05	5,62E-07	-5,09E-02
GWP - luluc	kg CO ₂ eq	2,83E-02	4,43E-04	1,01E-03	7,94E-06	4,43E-04	3,11E-05	5,93E-07	-1,59E-02
GWP - GHG	kg CO ₂ eq	4,27E+01	9,15E-01	4,85E-01	7,07E-02	9,15E-01	2,53E-01	9,86E-04	-2,39E+01
ODP	kg CFC-11 eq	1,40E-06	1,99E-08	8,54E-09	1,12E-09	1,99E-08	5,39E-09	2,84E-11	-4,17E-07
POCP	kg NMVOC eq	1,73E-01	4,45E-03	2,13E-03	9,76E-04	4,45E-03	7,43E-04	1,06E-05	-1,14E-01
AP	mol H ⁺ eq	1,74E-01	2,98E-03	6,14E-03	6,54E-04	2,98E-03	8,54E-04	7,40E-06	-1,08E-01
EP - freshwater	kg P eq	1,31E-02	6,39E-05	6,03E-04	2,17E-06	6,39E-05	3,45E-05	8,18E-08	-1,16E-02
EP - marine	kg N eq	4,24E-02	1,02E-03	6,09E-04	3,03E-04	1,02E-03	1,53E-04	2,84E-06	-2,47E-02
EP - terrestrial	mol N eq	4,46E-01	1,08E-02	6,69E-03	3,29E-03	1,08E-02	1,64E-03	3,04E-05	-2,51E-01
WDP	m ³ depriv.	1,18E+01	5,27E-02	1,55E-01	1,99E-03	5,27E-02	2,05E-02	1,08E-03	1,75E+00
ADP - F	MJ	4,24E+02	1,29E+01	8,16E+00	9,24E-01	1,29E+01	3,61E+00	2,45E-02	-2,52E+02
ADP - MM	kg Sb eq	2,71E-04	2,93E-06	6,15E-05	2,46E-08	2,93E-06	1,58E-07	1,36E-09	-1,72E-04
PERE	MJ	5,20E+01	2,53E-01	1,83E+00	6,40E-03	2,53E-01	3,24E-01	2,70E-04	-2,82E+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
PERT	MJ	5,20E+01	2,53E-01	1,83E+00	6,40E-03	2,53E-01	3,24E-01	2,70E-04	-2,82E+01
PENRE	MJ	4,79E+02	8,56E+00	7,17E+00	-2,38E+01	4,08E+00	3,59E+00	1,61E-02	-2,93E+02
PENRM	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
PENRT	MJ	4,79E+02	8,56E+00	7,17E+00	-2,38E+01	4,08E+00	3,59E+00	1,61E-02	-2,93E+02
SM	kg	5,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,76E-04	0,00E+00	-4,42E+00
RSF	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
NRSF	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
FW	m ³	2,56E-01	2,14E-03	4,14E-03	8,00E-05	2,14E-03	7,98E-04	2,61E-05	-2,79E-01
HW	kg	2,54E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,70E-04	0,00E+00	-1,76E-01
NHW	kg	2,78E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,70E-06	0,00E+00	-1,77E-02
RW	kg	5,01E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,82E-05	0,00E+00	-2,02E-03
REUSE	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
RECYCLE	kg	1,00E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,20E-04	0,00E+00	-1,21E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H1BLW3_MARC_2013-1

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	4,03E+01	9,14E-01	4,91E-01	7,06E-02	9,14E-01	2,52E-01	9,83E-04	-2,39E+01
GWP - fossil	kg CO ₂ eq	4,25E+01	9,13E-01	4,82E-01	7,06E-02	9,13E-01	2,52E-01	9,82E-04	-2,39E+01
GWP - biogenic	kg CO ₂ eq	-2,16E+00	8,26E-04	8,58E-03	1,62E-05	8,26E-04	-8,76E-05	5,62E-07	-5,09E-02
GWP - luluc	kg CO ₂ eq	2,83E-02	4,43E-04	1,01E-03	7,94E-06	4,43E-04	3,11E-05	5,93E-07	-1,59E-02
GWP - GHG	kg CO ₂ eq	4,27E+01	9,15E-01	4,85E-01	7,07E-02	9,15E-01	2,53E-01	9,86E-04	-2,39E+01
ODP	kg CFC-11 eq	1,40E-06	1,99E-08	8,54E-09	1,12E-09	1,99E-08	5,39E-09	2,84E-11	-4,17E-07
POCP	kg NMVOC eq	1,73E-01	4,45E-03	2,13E-03	9,76E-04	4,45E-03	7,43E-04	1,06E-05	-1,14E-01
AP	mol H ⁺ eq	1,74E-01	2,98E-03	6,14E-03	6,54E-04	2,98E-03	8,54E-04	7,40E-06	-1,08E-01
EP - freshwater	kg P eq	1,31E-02	6,39E-05	6,03E-04	2,17E-06	6,39E-05	3,45E-05	8,18E-08	-1,16E-02
EP - marine	kg N eq	4,24E-02	1,02E-03	6,09E-04	3,03E-04	1,02E-03	1,53E-04	2,84E-06	-2,47E-02
EP - terrestrial	mol N eq	4,46E-01	1,08E-02	6,69E-03	3,29E-03	1,08E-02	1,64E-03	3,04E-05	-2,51E-01
WDP	m ³ depriv.	1,18E+01	5,27E-02	1,55E-01	1,99E-03	5,27E-02	2,05E-02	1,08E-03	1,75E+00
ADP - F	MJ	4,24E+02	1,29E+01	8,16E+00	9,24E-01	1,29E+01	3,61E+00	2,45E-02	-2,52E+02
ADP - MM	kg Sb eq	2,71E-04	2,93E-06	6,15E-05	2,46E-08	2,93E-06	1,58E-07	1,36E-09	-1,72E-04
PERE	MJ	5,20E+01	2,53E-01	1,83E+00	6,40E-03	2,53E-01	3,24E-01	2,70E-04	-2,82E+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
PERT	MJ	5,20E+01	2,53E-01	1,83E+00	6,40E-03	2,53E-01	3,24E-01	2,70E-04	-2,82E+01
PENRE	MJ	4,79E+02	8,56E+00	7,17E+00	-2,38E+01	4,08E+00	3,59E+00	1,61E-02	-2,93E+02
PENRM	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
PENRT	MJ	4,79E+02	8,56E+00	7,17E+00	-2,38E+01	4,08E+00	3,59E+00	1,61E-02	-2,93E+02
SM	kg	5,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,76E-04	0,00E+00	-4,42E+00
RSF	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
NRSF	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
FW	m ³	2,56E-01	2,14E-03	4,14E-03	8,00E-05	2,14E-03	7,98E-04	2,61E-05	-2,79E-01
HW	kg	2,54E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,70E-04	0,00E+00	-1,76E-01
NHW	kg	2,78E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,70E-06	0,00E+00	-1,77E-02
RW	kg	5,01E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,82E-05	0,00E+00	-2,02E-03
REUSE	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
RECYCLE	kg	1,00E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,20E-04	0,00E+00	-1,21E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H1BLDX_MAR

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	6,86E+01	1,47E+00	4,91E-01	1,13E-01	1,47E+00	4,05E-01	1,58E-03	-3,85E+01
GWP - fossil	kg CO ₂ eq	7,09E+01	1,47E+00	4,82E-01	1,13E-01	1,47E+00	4,05E-01	1,58E-03	-3,84E+01
GWP - biogenic	kg CO ₂ eq	-2,34E+00	1,33E-03	8,58E-03	2,60E-05	1,33E-03	-1,41E-04	9,04E-07	-8,19E-02
GWP - luluc	kg CO ₂ eq	4,84E-02	7,12E-04	1,01E-03	1,28E-05	7,12E-04	5,01E-05	9,53E-07	-2,55E-02
GWP - GHG	kg CO ₂ eq	7,17E+01	1,47E+00	4,85E-01	1,14E-01	1,47E+00	4,06E-01	1,59E-03	-3,85E+01
ODP	kg CFC-11 eq	2,20E-06	3,19E-08	8,54E-09	1,80E-09	3,19E-08	8,67E-09	4,57E-11	-6,71E-07
POCP	kg NMVOC eq	2,90E-01	7,15E-03	2,13E-03	1,57E-03	7,15E-03	1,19E-03	1,70E-05	-1,83E-01
AP	mol H ⁺ eq	2,96E-01	4,78E-03	6,14E-03	1,05E-03	4,78E-03	1,37E-03	1,19E-05	-1,74E-01
EP - freshwater	kg P eq	2,28E-02	1,03E-04	6,03E-04	3,48E-06	1,03E-04	5,55E-05	1,31E-07	-1,87E-02
EP - marine	kg N eq	7,17E-02	1,65E-03	6,09E-04	4,87E-04	1,65E-03	2,46E-04	4,57E-06	-3,98E-02
EP - terrestrial	mol N eq	7,48E-01	1,74E-02	6,69E-03	5,30E-03	1,74E-02	2,64E-03	4,89E-05	-4,04E-01
WDP	m ³ depriv.	1,67E+01	8,48E-02	1,55E-01	3,20E-03	8,48E-02	3,29E-02	1,74E-03	2,81E+00
ADP - F	MJ	7,20E+02	2,08E+01	8,16E+00	1,49E+00	2,08E+01	5,81E+00	3,93E-02	-4,06E+02
ADP - MM	kg Sb eq	5,46E-04	4,71E-06	6,15E-05	3,96E-08	4,71E-06	2,55E-07	2,19E-09	-2,76E-04
PERE	MJ	8,88E+01	4,07E-01	1,83E+00	1,03E-02	4,07E-01	5,20E-01	4,34E-04	-4,53E+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
PERT	MJ	8,88E+01	4,07E-01	1,83E+00	1,03E-02	4,07E-01	5,20E-01	4,34E-04	-4,53E+01
PENRE	MJ	8,09E+02	1,38E+01	7,17E+00	-3,83E+01	4,42E+00	5,78E+00	2,58E-02	-4,72E+02
PENRM	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
PENRT	MJ	8,09E+02	1,38E+01	7,17E+00	-3,83E+01	4,42E+00	5,78E+00	2,58E-02	-4,72E+02
SM	kg	7,29E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,65E-04	0,00E+00	-7,11E+00
RSF	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
NRSF	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
FW	m ³	5,59E-01	3,44E-03	4,14E-03	1,29E-04	3,44E-03	1,28E-03	4,20E-05	-4,48E-01
HW	kg	4,22E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,73E-04	0,00E+00	-2,83E-01
NHW	kg	6,18E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,40E-05	0,00E+00	-2,84E-02
RW	kg	8,15E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,53E-05	0,00E+00	-3,25E-03
REUSE	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
RECYCLE	kg	1,67E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,96E-04	0,00E+00	-1,95E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BLW5_MARC_2014

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	5,95E+01	1,38E+00	4,91E-01	1,06E-01	1,38E+00	3,79E-01	1,48E-03	-3,60E+01
GWP - fossil	kg CO ₂ eq	6,29E+01	1,37E+00	4,82E-01	1,06E-01	1,37E+00	3,79E-01	1,48E-03	-3,59E+01
GWP - biogenic	kg CO ₂ eq	-3,38E+00	1,24E-03	8,58E-03	2,44E-05	1,24E-03	-1,32E-04	8,47E-07	-7,67E-02
GWP - luluc	kg CO ₂ eq	4,18E-02	6,67E-04	1,01E-03	1,20E-05	6,67E-04	4,69E-05	8,93E-07	-2,39E-02
GWP - GHG	kg CO ₂ eq	6,32E+01	1,38E+00	4,85E-01	1,06E-01	1,38E+00	3,80E-01	1,49E-03	-3,61E+01
ODP	kg CFC-11 eq	2,09E-06	2,99E-08	8,54E-09	1,69E-09	2,99E-08	8,12E-09	4,28E-11	-6,29E-07
POCP	kg NMVOC eq	2,56E-01	6,70E-03	2,13E-03	1,47E-03	6,70E-03	1,12E-03	1,60E-05	-1,71E-01
AP	mol H ⁺ eq	2,58E-01	4,48E-03	6,14E-03	9,85E-04	4,48E-03	1,29E-03	1,11E-05	-1,63E-01
EP - freshwater	kg P eq	1,92E-02	9,62E-05	6,03E-04	3,26E-06	9,62E-05	5,20E-05	1,23E-07	-1,75E-02
EP - marine	kg N eq	6,27E-02	1,54E-03	6,09E-04	4,57E-04	1,54E-03	2,30E-04	4,28E-06	-3,72E-02
EP - terrestrial	mol N eq	6,61E-01	1,63E-02	6,69E-03	4,96E-03	1,63E-02	2,47E-03	4,59E-05	-3,78E-01
WDP	m ³ depriv.	1,76E+01	7,94E-02	1,55E-01	3,00E-03	7,94E-02	3,08E-02	1,63E-03	2,63E+00
ADP - F	MJ	6,24E+02	1,95E+01	8,16E+00	1,39E+00	1,95E+01	5,44E+00	3,69E-02	-3,80E+02
ADP - MM	kg Sb eq	4,01E-04	4,41E-06	6,15E-05	3,71E-08	4,41E-06	2,39E-07	2,05E-09	-2,58E-04
PERE	MJ	7,63E+01	3,82E-01	1,83E+00	9,64E-03	3,82E-01	4,88E-01	4,06E-04	-4,25E+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
PERT	MJ	7,63E+01	3,82E-01	1,83E+00	9,64E-03	3,82E-01	4,88E-01	4,06E-04	-4,25E+01
PENRE	MJ	7,07E+02	1,29E+01	7,17E+00	-3,59E+01	6,13E+00	5,41E+00	2,42E-02	-4,42E+02
PENRM	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
PENRT	MJ	7,07E+02	1,29E+01	7,17E+00	-3,59E+01	6,13E+00	5,41E+00	2,42E-02	-4,42E+02
SM	kg	7,46E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,17E-04	0,00E+00	-6,66E+00
RSF	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
NRSF	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
FW	m ³	3,61E-01	3,22E-03	4,14E-03	1,20E-04	3,22E-03	1,20E-03	3,93E-05	-4,20E-01
HW	kg	3,81E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,56E-04	0,00E+00	-2,65E-01
NHW	kg	4,14E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,31E-05	0,00E+00	-2,66E-02
RW	kg	7,49E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,24E-05	0,00E+00	-3,04E-03
REUSE	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
RECYCLE	kg	1,50E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,33E-04	0,00E+00	-1,83E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL_W5_MAR_2013-1

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	5,41E+01	1,25E+00	4,37E-01	9,65E-02	1,25E+00	3,44E-01	1,34E-03	-3,27E+01
GWP - fossil	kg CO ₂ eq	5,71E+01	1,25E+00	4,28E-01	9,64E-02	1,25E+00	3,44E-01	1,34E-03	-3,26E+01
GWP - biogenic	kg CO ₂ eq	-3,09E+00	1,13E-03	7,63E-03	2,21E-05	1,13E-03	-1,20E-04	7,69E-07	-6,96E-02
GWP - luluc	kg CO ₂ eq	3,79E-02	6,06E-04	8,96E-04	1,09E-05	6,06E-04	4,26E-05	8,11E-07	-2,17E-02
GWP - GHG	kg CO ₂ eq	5,74E+01	1,25E+00	4,31E-01	9,66E-02	1,25E+00	3,45E-01	1,35E-03	-3,27E+01
ODP	kg CFC-11 eq	1,90E-06	2,71E-08	7,59E-09	1,53E-09	2,71E-08	7,37E-09	3,89E-11	-5,71E-07
POCP	kg NMVOC eq	2,32E-01	6,08E-03	1,90E-03	1,33E-03	6,08E-03	1,02E-03	1,45E-05	-1,55E-01
AP	mol H ⁺ eq	2,34E-01	4,07E-03	5,46E-03	8,94E-04	4,07E-03	1,17E-03	1,01E-05	-1,48E-01
EP - freshwater	kg P eq	1,74E-02	8,73E-05	5,36E-04	2,96E-06	8,73E-05	4,72E-05	1,12E-07	-1,59E-02
EP - marine	kg N eq	5,69E-02	1,40E-03	5,41E-04	4,14E-04	1,40E-03	2,09E-04	3,88E-06	-3,38E-02
EP - terrestrial	mol N eq	6,01E-01	1,48E-02	5,94E-03	4,50E-03	1,48E-02	2,24E-03	4,16E-05	-3,43E-01
WDP	m ³ depriv.	1,61E+01	7,21E-02	1,38E-01	2,72E-03	7,21E-02	2,80E-02	1,48E-03	2,39E+00
ADP - F	MJ	5,67E+02	1,77E+01	7,25E+00	1,26E+00	1,77E+01	4,94E+00	3,34E-02	-3,45E+02
ADP - MM	kg Sb eq	3,62E-04	4,01E-06	5,46E-05	3,37E-08	4,01E-06	2,17E-07	1,86E-09	-2,35E-04
PERE	MJ	6,94E+01	3,46E-01	1,63E+00	8,75E-03	3,46E-01	4,42E-01	3,69E-04	-3,85E+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
PERT	MJ	6,94E+01	3,46E-01	1,63E+00	8,75E-03	3,46E-01	4,42E-01	3,69E-04	-3,85E+01
PENRE	MJ	6,42E+02	1,17E+01	6,37E+00	-3,25E+01	5,53E+00	4,91E+00	2,20E-02	-4,01E+02
PENRM	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
PENRT	MJ	6,42E+02	1,17E+01	6,37E+00	-3,25E+01	5,53E+00	4,91E+00	2,20E-02	-4,01E+02
SM	kg	6,85E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,51E-04	0,00E+00	-6,05E+00
RSF	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
NRSF	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
FW	m ³	3,26E-01	2,93E-03	3,68E-03	1,09E-04	2,93E-03	1,09E-03	3,57E-05	-3,81E-01
HW	kg	3,46E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,32E-04	0,00E+00	-2,40E-01
NHW	kg	3,72E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,19E-05	0,00E+00	-2,41E-02
RW	kg	6,82E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,85E-05	0,00E+00	-2,76E-03
REUSE	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
RECYCLE	kg	1,37E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,47E-04	0,00E+00	-1,66E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL2N_W4_2014

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	5,41E+01	1,25E+00	4,37E-01	9,65E-02	1,25E+00	3,44E-01	1,34E-03	-3,27E+01
GWP - fossil	kg CO ₂ eq	5,71E+01	1,25E+00	4,28E-01	9,64E-02	1,25E+00	3,44E-01	1,34E-03	-3,26E+01
GWP - biogenic	kg CO ₂ eq	-3,09E+00	1,13E-03	7,63E-03	2,21E-05	1,13E-03	-1,20E-04	7,69E-07	-6,96E-02
GWP - luluc	kg CO ₂ eq	3,79E-02	6,06E-04	8,96E-04	1,09E-05	6,06E-04	4,26E-05	8,11E-07	-2,17E-02
GWP - GHG	kg CO ₂ eq	5,74E+01	1,25E+00	4,31E-01	9,66E-02	1,25E+00	3,45E-01	1,35E-03	-3,27E+01
ODP	kg CFC-11 eq	1,90E-06	2,71E-08	7,59E-09	1,53E-09	2,71E-08	7,37E-09	3,89E-11	-5,71E-07
POCP	kg NMVOC eq	2,32E-01	6,08E-03	1,90E-03	1,33E-03	6,08E-03	1,02E-03	1,45E-05	-1,55E-01
AP	mol H ⁺ eq	2,34E-01	4,07E-03	5,46E-03	8,94E-04	4,07E-03	1,17E-03	1,01E-05	-1,48E-01
EP - freshwater	kg P eq	1,74E-02	8,73E-05	5,36E-04	2,96E-06	8,73E-05	4,72E-05	1,12E-07	-1,59E-02
EP - marine	kg N eq	5,69E-02	1,40E-03	5,41E-04	4,14E-04	1,40E-03	2,09E-04	3,88E-06	-3,38E-02
EP - terrestrial	mol N eq	6,01E-01	1,48E-02	5,94E-03	4,50E-03	1,48E-02	2,24E-03	4,16E-05	-3,43E-01
WDP	m ³ depriv.	1,61E+01	7,21E-02	1,38E-01	2,72E-03	7,21E-02	2,80E-02	1,48E-03	2,39E+00
ADP - F	MJ	5,67E+02	1,77E+01	7,25E+00	1,26E+00	1,77E+01	4,94E+00	3,34E-02	-3,45E+02
ADP - MM	kg Sb eq	3,62E-04	4,01E-06	5,46E-05	3,37E-08	4,01E-06	2,17E-07	1,86E-09	-2,35E-04
PERE	MJ	6,94E+01	3,46E-01	1,63E+00	8,75E-03	3,46E-01	4,42E-01	3,69E-04	-3,85E+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
PERT	MJ	6,94E+01	3,46E-01	1,63E+00	8,75E-03	3,46E-01	4,42E-01	3,69E-04	-3,85E+01
PENRE	MJ	6,42E+02	1,17E+01	6,37E+00	-3,25E+01	5,53E+00	4,91E+00	2,20E-02	-4,01E+02
PENRM	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
PENRT	MJ	6,42E+02	1,17E+01	6,37E+00	-3,25E+01	5,53E+00	4,91E+00	2,20E-02	-4,01E+02
SM	kg	6,85E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,51E-04	0,00E+00	-6,05E+00
RSF	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
NRSF	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
FW	m ³	3,26E-01	2,93E-03	3,68E-03	1,09E-04	2,93E-03	1,09E-03	3,57E-05	-3,81E-01
HW	kg	3,46E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,32E-04	0,00E+00	-2,40E-01
NHW	kg	3,72E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,19E-05	0,00E+00	-2,41E-02
RW	kg	6,82E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,85E-05	0,00E+00	-2,76E-03
REUSE	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
RECYCLE	kg	1,37E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,47E-04	0,00E+00	-1,66E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL3N_MARC2010

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	5,57E+01	1,27E+00	4,37E-01	9,83E-02	1,27E+00	3,51E-01	1,37E-03	-3,33E+01
GWP - fossil	kg CO ₂ eq	5,87E+01	1,27E+00	4,28E-01	9,83E-02	1,27E+00	3,51E-01	1,37E-03	-3,32E+01
GWP - biogenic	kg CO ₂ eq	-2,99E+00	1,15E-03	7,63E-03	2,26E-05	1,15E-03	-1,22E-04	7,83E-07	-7,10E-02
GWP - luluc	kg CO ₂ eq	3,92E-02	6,17E-04	8,96E-04	1,11E-05	6,17E-04	4,34E-05	8,26E-07	-2,21E-02
GWP - GHG	kg CO ₂ eq	5,90E+01	1,27E+00	4,31E-01	9,85E-02	1,27E+00	3,52E-01	1,37E-03	-3,34E+01
ODP	kg CFC-11 eq	1,92E-06	2,77E-08	7,59E-09	1,56E-09	2,77E-08	7,51E-09	3,96E-11	-5,82E-07
POCP	kg NMVOC eq	2,39E-01	6,19E-03	1,90E-03	1,36E-03	6,19E-03	1,03E-03	1,48E-05	-1,58E-01
AP	mol H ⁺ eq	2,41E-01	4,15E-03	5,46E-03	9,11E-04	4,15E-03	1,19E-03	1,03E-05	-1,50E-01
EP - freshwater	kg P eq	1,81E-02	8,90E-05	5,36E-04	3,02E-06	8,90E-05	4,81E-05	1,14E-07	-1,62E-02
EP - marine	kg N eq	5,86E-02	1,43E-03	5,41E-04	4,22E-04	1,43E-03	2,13E-04	3,96E-06	-3,44E-02
EP - terrestrial	mol N eq	6,17E-01	1,51E-02	5,94E-03	4,59E-03	1,51E-02	2,28E-03	4,24E-05	-3,50E-01
WDP	m ³ depriv.	1,61E+01	7,35E-02	1,38E-01	2,77E-03	7,35E-02	2,85E-02	1,51E-03	2,43E+00
ADP - F	MJ	5,85E+02	1,80E+01	7,25E+00	1,29E+00	1,80E+01	5,03E+00	3,41E-02	-3,52E+02
ADP - MM	kg Sb eq	3,84E-04	4,08E-06	5,46E-05	3,43E-08	4,08E-06	2,21E-07	1,90E-09	-2,39E-04
PERE	MJ	7,16E+01	3,53E-01	1,63E+00	8,92E-03	3,53E-01	4,51E-01	3,76E-04	-3,93E+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
PERT	MJ	7,16E+01	3,53E-01	1,63E+00	8,92E-03	3,53E-01	4,51E-01	3,76E-04	-3,93E+01
PENRE	MJ	6,61E+02	1,19E+01	6,37E+00	-3,32E+01	5,78E+00	5,01E+00	2,24E-02	-4,09E+02
PENRM	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
PENRT	MJ	6,61E+02	1,19E+01	6,37E+00	-3,32E+01	5,78E+00	5,01E+00	2,24E-02	-4,09E+02
SM	kg	6,82E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,63E-04	0,00E+00	-6,16E+00
RSF	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
NRSF	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
FW	m ³	3,57E-01	2,98E-03	3,68E-03	1,11E-04	2,98E-03	1,11E-03	3,64E-05	-3,88E-01
HW	kg	3,52E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,37E-04	0,00E+00	-2,45E-01
NHW	kg	3,98E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,21E-05	0,00E+00	-2,46E-02
RW	kg	6,91E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,92E-05	0,00E+00	-2,81E-03
REUSE	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
RECYCLE	kg	1,39E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,63E-04	0,00E+00	-1,69E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BLDX2N_MAR

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	6,86E+01	1,47E+00	4,91E-01	1,13E-01	1,47E+00	4,05E-01	1,58E-03	-3,85E+01
GWP - fossil	kg CO ₂ eq	7,09E+01	1,47E+00	4,82E-01	1,13E-01	1,47E+00	4,05E-01	1,58E-03	-3,84E+01
GWP - biogenic	kg CO ₂ eq	-2,34E+00	1,33E-03	8,58E-03	2,60E-05	1,33E-03	-1,41E-04	9,04E-07	-8,19E-02
GWP - luluc	kg CO ₂ eq	4,84E-02	7,12E-04	1,01E-03	1,28E-05	7,12E-04	5,01E-05	9,53E-07	-2,55E-02
GWP - GHG	kg CO ₂ eq	7,17E+01	1,47E+00	4,85E-01	1,14E-01	1,47E+00	4,06E-01	1,59E-03	-3,85E+01
ODP	kg CFC-11 eq	2,20E-06	3,19E-08	8,54E-09	1,80E-09	3,19E-08	8,67E-09	4,57E-11	-6,71E-07
POCP	kg NMVOC eq	2,90E-01	7,15E-03	2,13E-03	1,57E-03	7,15E-03	1,19E-03	1,70E-05	-1,83E-01
AP	mol H+ eq	2,96E-01	4,78E-03	6,14E-03	1,05E-03	4,78E-03	1,37E-03	1,19E-05	-1,74E-01
EP - freshwater	kg P eq	2,28E-02	1,03E-04	6,03E-04	3,48E-06	1,03E-04	5,55E-05	1,31E-07	-1,87E-02
EP - marine	kg N eq	7,17E-02	1,65E-03	6,09E-04	4,87E-04	1,65E-03	2,46E-04	4,57E-06	-3,98E-02
EP - terrestrial	mol N eq	7,48E-01	1,74E-02	6,69E-03	5,30E-03	1,74E-02	2,64E-03	4,89E-05	-4,04E-01
WDP	m ³ depriv.	1,67E+01	8,48E-02	1,55E-01	3,20E-03	8,48E-02	3,29E-02	1,74E-03	2,81E+00
ADP - F	MJ	7,20E+02	2,08E+01	8,16E+00	1,49E+00	2,08E+01	5,81E+00	3,93E-02	-4,06E+02
ADP - MM	kg Sb eq	5,46E-04	4,71E-06	6,15E-05	3,96E-08	4,71E-06	2,55E-07	2,19E-09	-2,76E-04
PERE	MJ	8,88E+01	4,07E-01	1,83E+00	1,03E-02	4,07E-01	5,20E-01	4,34E-04	-4,53E+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
PERT	MJ	8,88E+01	4,07E-01	1,83E+00	1,03E-02	4,07E-01	5,20E-01	4,34E-04	-4,53E+01
PENRE	MJ	8,09E+02	1,38E+01	7,17E+00	-3,83E+01	4,42E+00	5,78E+00	2,58E-02	-4,72E+02
PENRM	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
PENRT	MJ	8,09E+02	1,38E+01	7,17E+00	-3,83E+01	4,42E+00	5,78E+00	2,58E-02	-4,72E+02
SM	kg	7,29E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,65E-04	0,00E+00	-7,11E+00
RSF	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
NRSF	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
FW	m ³	5,59E-01	3,44E-03	4,14E-03	1,29E-04	3,44E-03	1,28E-03	4,20E-05	-4,48E-01
HW	kg	4,22E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,73E-04	0,00E+00	-2,83E-01
NHW	kg	6,18E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,40E-05	0,00E+00	-2,84E-02
RW	kg	8,15E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,53E-05	0,00E+00	-3,25E-03
REUSE	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
RECYCLE	kg	1,67E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,96E-04	0,00E+00	-1,95E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL3N_MARC_2011

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	6,40E+01	1,43E+00	4,37E-01	1,10E-01	1,43E+00	3,93E-01	1,53E-03	-3,73E+01
GWP - fossil	kg CO ₂ eq	6,69E+01	1,42E+00	4,28E-01	1,10E-01	1,42E+00	3,93E-01	1,53E-03	-3,72E+01
GWP - biogenic	kg CO ₂ eq	-2,89E+00	1,29E-03	7,63E-03	2,53E-05	1,29E-03	-1,37E-04	8,77E-07	-7,95E-02
GWP - luluc	kg CO ₂ eq	4,53E-02	6,91E-04	8,96E-04	1,24E-05	6,91E-04	4,86E-05	9,25E-07	-2,47E-02
GWP - GHG	kg CO ₂ eq	6,74E+01	1,43E+00	4,31E-01	1,10E-01	1,43E+00	3,94E-01	1,54E-03	-3,74E+01
ODP	kg CFC-11 eq	2,12E-06	3,10E-08	7,59E-09	1,75E-09	3,10E-08	8,41E-09	4,44E-11	-6,51E-07
POCP	kg NMVOC eq	2,75E-01	6,94E-03	1,90E-03	1,52E-03	6,94E-03	1,16E-03	1,65E-05	-1,77E-01
AP	mol H ⁺ eq	2,78E-01	4,64E-03	5,46E-03	1,02E-03	4,64E-03	1,33E-03	1,15E-05	-1,68E-01
EP - freshwater	kg P eq	2,14E-02	9,96E-05	5,36E-04	3,38E-06	9,96E-05	5,38E-05	1,28E-07	-1,81E-02
EP - marine	kg N eq	6,72E-02	1,60E-03	5,41E-04	4,73E-04	1,60E-03	2,39E-04	4,43E-06	-3,86E-02
EP - terrestrial	mol N eq	7,04E-01	1,69E-02	5,94E-03	5,14E-03	1,69E-02	2,56E-03	4,75E-05	-3,92E-01
WDP	m ³ depriv.	1,68E+01	8,23E-02	1,38E-01	3,11E-03	8,23E-02	3,19E-02	1,69E-03	2,73E+00
ADP - F	MJ	6,75E+02	2,02E+01	7,25E+00	1,44E+00	2,02E+01	5,64E+00	3,82E-02	-3,94E+02
ADP - MM	kg Sb eq	4,74E-04	4,57E-06	5,46E-05	3,84E-08	4,57E-06	2,47E-07	2,13E-09	-2,68E-04
PERE	MJ	8,23E+01	3,95E-01	1,63E+00	9,99E-03	3,95E-01	5,05E-01	4,21E-04	-4,40E+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
PERT	MJ	8,23E+01	3,95E-01	1,63E+00	9,99E-03	3,95E-01	5,05E-01	4,21E-04	-4,40E+01
PENRE	MJ	7,59E+02	1,34E+01	6,37E+00	-3,72E+01	6,92E+00	5,61E+00	2,50E-02	-4,58E+02
PENRM	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
PENRT	MJ	7,59E+02	1,34E+01	6,37E+00	-3,72E+01	6,92E+00	5,61E+00	2,50E-02	-4,58E+02
SM	kg	7,13E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,43E-04	0,00E+00	-6,90E+00
RSF	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
NRSF	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
FW	m ³	4,72E-01	3,34E-03	3,68E-03	1,25E-04	3,34E-03	1,25E-03	4,07E-05	-4,35E-01
HW	kg	3,91E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,65E-04	0,00E+00	-2,74E-01
NHW	kg	5,00E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,36E-05	0,00E+00	-2,76E-02
RW	kg	7,61E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,39E-05	0,00E+00	-3,15E-03
REUSE	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
RECYCLE	kg	1,54E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,67E-04	0,00E+00	-1,89E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BLW5_MARC_2015

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	6,75E+01	1,48E+00	4,37E-01	1,14E-01	1,48E+00	4,08E-01	1,59E-03	-3,88E+01
GWP - fossil	kg CO ₂ eq	7,03E+01	1,48E+00	4,28E-01	1,14E-01	1,48E+00	4,08E-01	1,59E-03	-3,87E+01
GWP - biogenic	kg CO ₂ eq	-2,80E+00	1,34E-03	7,63E-03	2,63E-05	1,34E-03	-1,42E-04	9,12E-07	-8,26E-02
GWP - luluc	kg CO ₂ eq	4,73E-02	7,19E-04	8,96E-04	1,29E-05	7,19E-04	5,05E-05	9,62E-07	-2,57E-02
GWP - GHG	kg CO ₂ eq	7,09E+01	1,48E+00	4,31E-01	1,15E-01	1,48E+00	4,10E-01	1,60E-03	-3,88E+01
ODP	kg CFC-11 eq	2,27E-06	3,22E-08	7,59E-09	1,82E-09	3,22E-08	8,74E-09	4,61E-11	-6,77E-07
POCP	kg NMVOC eq	2,84E-01	7,21E-03	1,90E-03	1,58E-03	7,21E-03	1,20E-03	1,72E-05	-1,84E-01
AP	mol H ⁺ eq	2,91E-01	4,80E-03	5,46E-03	1,06E-03	4,83E-03	1,38E-03	1,20E-05	-1,75E-01
EP - freshwater	kg P eq	2,16E-02	1,04E-04	5,36E-04	3,51E-06	1,04E-04	5,60E-05	1,33E-07	-1,89E-02
EP - marine	kg N eq	7,07E-02	1,66E-03	5,41E-04	4,92E-04	1,66E-03	2,48E-04	4,61E-06	-4,01E-02
EP - terrestrial	mol N eq	7,42E-01	1,75E-02	5,94E-03	5,34E-03	1,75E-02	2,66E-03	4,94E-05	-4,07E-01
WDP	m ³ depriv.	1,83E+01	8,55E-02	1,38E-01	3,23E-03	8,55E-02	3,32E-02	1,75E-03	2,83E+00
ADP - F	MJ	7,03E+02	2,10E+01	7,25E+00	1,50E+00	2,10E+01	5,86E+00	3,97E-02	-4,10E+02
ADP - MM	kg Sb eq	5,09E-04	4,75E-06	5,46E-05	3,99E-08	4,75E-06	2,57E-07	2,21E-09	-2,78E-04
PERE	MJ	8,74E+01	4,11E-01	1,63E+00	1,04E-02	4,11E-01	5,25E-01	4,37E-04	-4,57E+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
PERT	MJ	8,74E+01	4,11E-01	1,63E+00	1,04E-02	4,11E-01	5,25E-01	4,37E-04	-4,57E+01
PENRE	MJ	7,94E+02	1,39E+01	6,37E+00	-3,86E+01	2,59E+00	5,83E+00	2,60E-02	-4,76E+02
PENRM	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
PENRT	MJ	7,94E+02	1,39E+01	6,37E+00	-3,86E+01	2,59E+00	5,83E+00	2,60E-02	-4,76E+02
SM	kg	8,01E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,72E-04	0,00E+00	-7,17E+00
RSF	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
NRSF	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
FW	m ³	4,81E-01	3,47E-03	3,68E-03	1,30E-04	3,47E-03	1,29E-03	4,24E-05	-4,52E-01
HW	kg	4,44E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,76E-04	0,00E+00	-2,85E-01
NHW	kg	5,89E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,41E-05	0,00E+00	-2,86E-02
RW	kg	8,62E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,57E-05	0,00E+00	-3,28E-03
REUSE	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
RECYCLE	kg	1,75E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,00E-03	0,00E+00	-1,97E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BLW5_MARC_2017

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	6,55E+01	1,49E+00	4,37E-01	1,15E-01	1,49E+00	4,11E-01	1,61E-03	-3,91E+01
GWP - fossil	kg CO ₂ eq	6,88E+01	1,49E+00	4,28E-01	1,15E-01	1,49E+00	4,11E-01	1,60E-03	-3,90E+01
GWP - biogenic	kg CO ₂ eq	-3,42E+00	1,35E-03	7,63E-03	2,64E-05	1,35E-03	-1,43E-04	9,19E-07	-8,32E-02
GWP - luluc	kg CO ₂ eq	4,60E-02	7,24E-04	8,96E-04	1,30E-05	7,24E-04	5,09E-05	9,69E-07	-2,59E-02
GWP - GHG	kg CO ₂ eq	6,93E+01	1,49E+00	4,31E-01	1,15E-01	1,49E+00	4,13E-01	1,61E-03	-3,91E+01
ODP	kg CFC-11 eq	2,26E-06	3,24E-08	7,59E-09	1,83E-09	3,24E-08	8,81E-09	4,65E-11	-6,82E-07
POCP	kg NMVOC eq	2,80E-01	7,26E-03	1,90E-03	1,59E-03	7,26E-03	1,21E-03	1,73E-05	-1,86E-01
AP	mol H+ eq	2,83E-01	4,90E-03	5,46E-03	1,07E-03	4,86E-03	1,39E-03	1,21E-05	-1,76E-01
EP - freshwater	kg P eq	2,11E-02	1,04E-04	5,36E-04	3,54E-06	1,04E-04	5,64E-05	1,34E-07	-1,90E-02
EP - marine	kg N eq	6,88E-02	1,67E-03	5,41E-04	4,95E-04	1,67E-03	2,50E-04	4,64E-06	-4,04E-02
EP - terrestrial	mol N eq	7,25E-01	1,77E-02	5,94E-03	5,38E-03	1,77E-02	2,68E-03	4,97E-05	-4,10E-01
WDP	m ³ depriv.	1,88E+01	8,61E-02	1,38E-01	3,25E-03	8,61E-02	3,34E-02	1,77E-03	2,85E+00
ADP - F	MJ	6,85E+02	2,11E+01	7,25E+00	1,51E+00	2,11E+01	5,90E+00	4,00E-02	-4,12E+02
ADP - MM	kg Sb eq	4,58E-04	4,79E-06	5,46E-05	4,02E-08	4,79E-06	2,59E-07	2,23E-09	-2,80E-04
PERE	MJ	8,41E+01	4,14E-01	1,63E+00	1,05E-02	4,14E-01	5,29E-01	4,41E-04	-4,61E+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
PERT	MJ	8,41E+01	4,14E-01	1,63E+00	1,05E-02	4,14E-01	5,29E-01	4,41E-04	-4,61E+01
PENRE	MJ	7,75E+02	1,40E+01	6,37E+00	-3,89E+01	5,72E+00	5,87E+00	2,62E-02	-4,79E+02
PENRM	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
PENRT	MJ	7,75E+02	1,40E+01	6,37E+00	-3,89E+01	5,72E+00	5,87E+00	2,62E-02	-4,79E+02
SM	kg	8,00E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,78E-04	0,00E+00	-7,22E+00
RSF	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
NRSF	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
FW	m ³	4,20E-01	3,50E-03	3,68E-03	1,31E-04	3,50E-03	1,30E-03	4,27E-05	-4,55E-01
HW	kg	4,21E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,78E-04	0,00E+00	-2,87E-01
NHW	kg	4,90E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,42E-05	0,00E+00	-2,88E-02
RW	kg	8,24E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,60E-05	0,00E+00	-3,30E-03
REUSE	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
RECYCLE	kg	1,66E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E-03	0,00E+00	-1,98E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL3NDX_MARC2009

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	7,08E+01	1,58E+00	4,37E-01	1,22E-01	1,58E+00	4,36E-01	1,70E-03	-4,14E+01
GWP - fossil	kg CO ₂ eq	7,40E+01	1,58E+00	4,28E-01	1,22E-01	1,58E+00	4,36E-01	1,70E-03	-4,13E+01
GWP - biogenic	kg CO ₂ eq	-3,27E+00	1,43E-03	7,63E-03	2,80E-05	1,43E-03	-1,52E-04	9,74E-07	-8,82E-02
GWP - luluc	kg CO ₂ eq	4,97E-02	7,67E-04	8,96E-04	1,37E-05	7,67E-04	5,39E-05	1,03E-06	-2,75E-02
GWP - GHG	kg CO ₂ eq	7,46E+01	1,58E+00	4,31E-01	1,22E-01	1,58E+00	4,37E-01	1,71E-03	-4,15E+01
ODP	kg CFC-11 eq	2,40E-06	3,44E-08	7,59E-09	1,94E-09	3,44E-08	9,33E-09	4,93E-11	-7,23E-07
POCP	kg NMVOC eq	3,00E-01	7,70E-03	1,90E-03	1,69E-03	7,70E-03	1,29E-03	1,83E-05	-1,97E-01
AP	mol H+ eq	3,06E-01	5,15E-03	5,46E-03	1,13E-03	5,15E-03	1,48E-03	1,28E-05	-1,87E-01
EP - freshwater	kg P eq	2,29E-02	1,11E-04	5,36E-04	3,75E-06	1,11E-04	5,98E-05	1,42E-07	-2,01E-02
EP - marine	kg N eq	7,43E-02	1,77E-03	5,41E-04	5,25E-04	1,77E-03	2,65E-04	4,92E-06	-4,28E-02
EP - terrestrial	mol N eq	7,80E-01	1,87E-02	5,94E-03	5,70E-03	1,87E-02	2,84E-03	5,27E-05	-4,35E-01
WDP	m ³ depriv.	1,95E+01	9,13E-02	1,38E-01	3,45E-03	9,13E-02	3,54E-02	1,87E-03	3,03E+00
ADP - F	MJ	7,40E+02	2,24E+01	7,25E+00	1,60E+00	2,24E+01	6,25E+00	4,24E-02	-4,37E+02
ADP - MM	kg Sb eq	5,19E-04	5,07E-06	5,46E-05	4,26E-08	5,07E-06	2,74E-07	2,36E-09	-2,97E-04
PERE	MJ	9,13E+01	4,39E-01	1,63E+00	1,11E-02	4,39E-01	5,60E-01	4,67E-04	-4,88E+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
PERT	MJ	9,13E+01	4,39E-01	1,63E+00	1,11E-02	4,39E-01	5,60E-01	4,67E-04	-4,88E+01
PENRE	MJ	8,36E+02	1,48E+01	6,37E+00	-4,12E+01	4,72E+00	6,22E+00	2,78E-02	-5,08E+02
PENRM	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
PENRT	MJ	8,36E+02	1,48E+01	6,37E+00	-4,12E+01	4,72E+00	6,22E+00	2,78E-02	-5,08E+02
SM	kg	8,39E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,24E-04	0,00E+00	-7,66E+00
RSF	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
NRSF	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
FW	m ³	4,88E-01	3,71E-03	3,68E-03	1,38E-04	3,71E-03	1,38E-03	4,52E-05	-4,83E-01
HW	kg	4,57E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,94E-04	0,00E+00	-3,05E-01
NHW	kg	5,78E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,51E-05	0,00E+00	-3,06E-02
RW	kg	8,91E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,88E-05	0,00E+00	-3,50E-03
REUSE	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
RECYCLE	kg	1,80E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,07E-03	0,00E+00	-2,10E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BLW4_MARC_2020

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	7,11E+01	1,59E+00	4,37E-01	1,23E-01	1,59E+00	4,37E-01	1,71E-03	-4,16E+01
GWP - fossil	kg CO ₂ eq	7,43E+01	1,59E+00	4,28E-01	1,23E-01	1,59E+00	4,37E-01	1,71E-03	-4,14E+01
GWP - biogenic	kg CO ₂ eq	-3,24E+00	1,43E-03	7,63E-03	2,81E-05	1,43E-03	-1,52E-04	9,77E-07	-8,85E-02
GWP - luluc	kg CO ₂ eq	5,01E-02	7,70E-04	8,96E-04	1,38E-05	7,70E-04	5,41E-05	1,03E-06	-2,75E-02
GWP - GHG	kg CO ₂ eq	7,49E+01	1,59E+00	4,31E-01	1,23E-01	1,59E+00	4,39E-01	1,71E-03	-4,16E+01
ODP	kg CFC-11 eq	2,39E-06	3,45E-08	7,59E-09	1,95E-09	3,45E-08	9,36E-09	4,94E-11	-7,25E-07
POCP	kg NMVOC eq	3,03E-01	7,72E-03	1,90E-03	1,70E-03	7,72E-03	1,29E-03	1,84E-05	-1,98E-01
AP	mol H ⁺ eq	3,08E-01	5,17E-03	5,46E-03	1,14E-03	5,17E-03	1,48E-03	1,29E-05	-1,88E-01
EP - freshwater	kg P eq	2,33E-02	1,11E-04	5,36E-04	3,76E-06	1,11E-04	5,99E-05	1,42E-07	-2,02E-02
EP - marine	kg N eq	7,46E-02	1,78E-03	5,41E-04	5,27E-04	1,78E-03	2,66E-04	4,93E-06	-4,29E-02
EP - terrestrial	mol N eq	7,83E-01	1,88E-02	5,94E-03	5,72E-03	1,88E-02	2,85E-03	5,29E-05	-4,36E-01
WDP	m ³ depriv.	1,92E+01	9,16E-02	1,38E-01	3,46E-03	9,16E-02	3,55E-02	1,88E-03	3,04E+00
ADP - F	MJ	7,45E+02	2,25E+01	7,25E+00	1,61E+00	2,25E+01	6,27E+00	4,25E-02	-4,39E+02
ADP - MM	kg Sb eq	5,25E-04	5,09E-06	5,46E-05	4,28E-08	5,09E-06	2,75E-07	2,37E-09	-2,98E-04
PERE	MJ	9,16E+01	4,40E-01	1,63E+00	1,11E-02	4,40E-01	5,62E-01	4,68E-04	-4,90E+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
PERT	MJ	9,16E+01	4,40E-01	1,63E+00	1,11E-02	4,40E-01	5,62E-01	4,68E-04	-4,90E+01
PENRE	MJ	8,41E+02	1,49E+01	6,37E+00	-4,14E+01	5,73E+00	6,24E+00	2,79E-02	-5,09E+02
PENRM	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
PENRT	MJ	8,41E+02	1,49E+01	6,37E+00	-4,14E+01	5,73E+00	6,24E+00	2,79E-02	-5,09E+02
SM	kg	8,22E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,27E-04	0,00E+00	-7,68E+00
RSF	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
NRSF	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
FW	m ³	5,03E-01	3,72E-03	3,68E-03	1,39E-04	3,72E-03	1,39E-03	4,54E-05	-4,84E-01
HW	kg	4,49E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,95E-04	0,00E+00	-3,06E-01
NHW	kg	5,74E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,51E-05	0,00E+00	-3,07E-02
RW	kg	8,75E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,89E-05	0,00E+00	-3,51E-03
REUSE	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
RECYCLE	kg	1,77E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,08E-03	0,00E+00	-2,11E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL3N_W3_MAR_2011

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	7,18E+01	1,62E+00	4,37E-01	1,25E-01	1,62E+00	4,46E-01	1,74E-03	-4,24E+01
GWP - fossil	kg CO ₂ eq	7,52E+01	1,62E+00	4,28E-01	1,25E-01	1,62E+00	4,46E-01	1,74E-03	-4,23E+01
GWP - biogenic	kg CO ₂ eq	-3,48E+00	1,46E-03	7,63E-03	2,87E-05	1,46E-03	-1,55E-04	9,97E-07	-9,04E-02
GWP - luluc	kg CO ₂ eq	5,07E-02	7,86E-04	8,96E-04	1,41E-05	7,86E-04	5,52E-05	1,05E-06	-2,81E-02
GWP - GHG	kg CO ₂ eq	7,58E+01	1,62E+00	4,31E-01	1,25E-01	1,62E+00	4,48E-01	1,75E-03	-4,25E+01
ODP	kg CFC-11 eq	2,41E-06	3,52E-08	7,59E-09	1,99E-09	3,52E-08	9,56E-09	5,04E-11	-7,40E-07
POCP	kg NMVOC eq	3,09E-01	7,88E-03	1,90E-03	1,73E-03	7,88E-03	1,32E-03	1,88E-05	-2,02E-01
AP	mol H ⁺ eq	3,11E-01	5,28E-03	5,46E-03	1,16E-03	5,28E-03	1,51E-03	1,31E-05	-1,91E-01
EP - freshwater	kg P eq	2,38E-02	1,13E-04	5,36E-04	3,84E-06	1,13E-04	6,12E-05	1,45E-07	-2,06E-02
EP - marine	kg N eq	7,54E-02	1,81E-03	5,41E-04	5,37E-04	1,81E-03	2,71E-04	5,04E-06	-4,38E-02
EP - terrestrial	mol N eq	7,92E-01	1,92E-02	5,94E-03	5,84E-03	1,92E-02	2,91E-03	5,40E-05	-4,45E-01
WDP	m ³ depriv.	1,94E+01	9,35E-02	1,38E-01	3,53E-03	9,35E-02	3,63E-02	1,92E-03	3,10E+00
ADP - F	MJ	7,55E+02	2,29E+01	7,25E+00	1,64E+00	2,29E+01	6,40E+00	4,34E-02	-4,48E+02
ADP - MM	kg Sb eq	5,21E-04	5,20E-06	5,46E-05	4,37E-08	5,20E-06	2,81E-07	2,42E-09	-3,04E-04
PERE	MJ	9,21E+01	4,49E-01	1,63E+00	1,13E-02	4,49E-01	5,74E-01	4,78E-04	-5,00E+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
PERT	MJ	9,21E+01	4,49E-01	1,63E+00	1,13E-02	4,49E-01	5,74E-01	4,78E-04	-5,00E+01
PENRE	MJ	8,51E+02	1,52E+01	6,37E+00	-4,22E+01	7,71E+00	6,37E+00	2,84E-02	-5,20E+02
PENRM	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
PENRT	MJ	8,51E+02	1,52E+01	6,37E+00	-4,22E+01	7,71E+00	6,37E+00	2,84E-02	-5,20E+02
SM	kg	8,20E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,44E-04	0,00E+00	-7,84E+00
RSF	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
NRSF	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
FW	m ³	5,03E-01	3,80E-03	3,68E-03	1,42E-04	3,80E-03	1,41E-03	4,63E-05	-4,94E-01
HW	kg	4,45E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,01E-04	0,00E+00	-3,12E-01
NHW	kg	5,48E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,54E-05	0,00E+00	-3,13E-02
RW	kg	8,67E-03	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,99E-05	0,00E+00	-3,58E-03
REUSE	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
RECYCLE	kg	1,75E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,10E-03	0,00E+00	-2,15E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL-T1-2017AS_M1

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,05E+02	1,90E+00	4,37E-01	1,46E-01	1,90E+00	5,22E-01	2,04E-03	-4,96E+01
GWP - fossil	kg CO ₂ eq	1,10E+02	1,89E+00	4,28E-01	1,46E-01	1,89E+00	5,22E-01	2,04E-03	-4,94E+01
GWP - biogenic	kg CO ₂ eq	-5,08E+00	1,71E-03	7,63E-03	3,36E-05	1,71E-03	-1,82E-04	1,17E-06	-1,06E-01
GWP - luluc	kg CO ₂ eq	7,34E-02	9,19E-04	8,96E-04	1,65E-05	9,19E-04	6,46E-05	1,23E-06	-3,28E-02
GWP - GHG	kg CO ₂ eq	1,10E+02	1,90E+00	4,31E-01	1,47E-01	1,90E+00	5,24E-01	2,05E-03	-4,96E+01
ODP	kg CFC-11 eq	3,59E-06	4,12E-08	7,59E-09	2,33E-09	4,12E-08	1,12E-08	5,90E-11	-8,65E-07
POCP	kg NMVOC eq	4,44E-01	9,22E-03	1,90E-03	2,02E-03	9,22E-03	1,54E-03	2,20E-05	-2,36E-01
AP	mol H+ eq	4,52E-01	6,17E-03	5,46E-03	1,36E-03	6,17E-03	1,77E-03	1,53E-05	-2,24E-01
EP - freshwater	kg P eq	3,36E-02	1,32E-04	5,36E-04	4,49E-06	1,32E-04	7,16E-05	1,70E-07	-2,41E-02
EP - marine	kg N eq	1,10E-01	2,12E-03	5,41E-04	6,29E-04	2,12E-03	3,17E-04	5,89E-06	-5,12E-02
EP - terrestrial	mol N eq	1,16E+00	2,24E-02	5,94E-03	6,83E-03	2,24E-02	3,40E-03	6,31E-05	-5,20E-01
WDP	m ³ depriv.	2,92E+01	1,09E-01	1,38E-01	4,13E-03	1,09E-01	4,24E-02	2,24E-03	3,62E+00
ADP - F	MJ	1,09E+03	2,68E+01	7,25E+00	1,92E+00	2,68E+01	7,49E+00	5,08E-02	-5,23E+02
ADP - MM	kg Sb eq	7,65E-04	6,08E-06	5,46E-05	5,11E-08	6,08E-06	3,29E-07	2,83E-09	-3,55E-04
PERE	MJ	1,34E+02	5,26E-01	1,63E+00	1,33E-02	5,26E-01	6,71E-01	5,59E-04	-5,84E+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
PERT	MJ	1,34E+02	5,26E-01	1,63E+00	1,33E-02	5,26E-01	6,71E-01	5,59E-04	-5,84E+01
PENRE	MJ	1,23E+03	1,78E+01	6,37E+00	-4,93E+01	2,04E+00	7,46E+00	3,32E-02	-6,07E+02
PENRM	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
PENRT	MJ	1,23E+03	1,78E+01	6,37E+00	-4,93E+01	2,04E+00	7,46E+00	3,32E-02	-6,07E+02
SM	kg	1,25E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,87E-04	0,00E+00	-9,16E+00
RSF	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
NRSF	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
FW	m ³	6,92E-01	4,44E-03	3,68E-03	1,66E-04	4,44E-03	1,66E-03	5,42E-05	-5,78E-01
HW	kg	6,88E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,52E-04	0,00E+00	-3,64E-01
NHW	kg	8,60E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,80E-05	0,00E+00	-3,66E-02
RW	kg	1,34E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,84E-05	0,00E+00	-4,18E-03
REUSE	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
RECYCLE	kg	2,72E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,29E-03	0,00E+00	-2,52E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL-2017AS_M1

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,04E+02	2,37E+00	4,37E-01	1,83E-01	2,37E+00	6,53E-01	2,55E-03	-6,20E+01
GWP - fossil	kg CO ₂ eq	1,09E+02	2,37E+00	4,28E-01	1,83E-01	2,37E+00	6,53E-01	2,55E-03	-6,19E+01
GWP - biogenic	kg CO ₂ eq	-5,12E+00	2,14E-03	7,63E-03	4,20E-05	2,14E-03	-2,27E-04	1,46E-06	-1,32E-01
GWP - luluc	kg CO ₂ eq	7,27E-02	1,15E-03	8,96E-04	2,06E-05	1,15E-03	8,07E-05	1,54E-06	-4,11E-02
GWP - GHG	kg CO ₂ eq	1,10E+02	2,37E+00	4,31E-01	1,83E-01	2,37E+00	6,55E-01	2,56E-03	-6,21E+01
ODP	kg CFC-11 eq	3,57E-06	5,15E-08	7,59E-09	2,91E-09	5,15E-08	1,40E-08	7,38E-11	-1,08E-06
POCP	kg NMVOC eq	4,40E-01	1,15E-02	1,90E-03	2,53E-03	1,15E-02	1,93E-03	2,75E-05	-2,95E-01
AP	mol H ⁺ eq	4,48E-01	7,72E-03	5,46E-03	1,70E-03	7,72E-03	2,21E-03	1,92E-05	-2,80E-01
EP - freshwater	kg P eq	3,32E-02	1,66E-04	5,36E-04	5,62E-06	1,66E-04	8,95E-05	2,12E-07	-3,01E-02
EP - marine	kg N eq	1,09E-01	2,65E-03	5,41E-04	7,86E-04	2,65E-03	3,96E-04	7,36E-06	-6,41E-02
EP - terrestrial	mol N eq	1,15E+00	2,80E-02	5,94E-03	8,54E-03	2,80E-02	4,25E-03	7,89E-05	-6,51E-01
WDP	m ³ depriv.	2,92E+01	1,37E-01	1,38E-01	5,16E-03	1,37E-01	5,30E-02	2,80E-03	4,53E+00
ADP - F	MJ	1,08E+03	3,36E+01	7,25E+00	2,40E+00	3,36E+01	9,37E+00	6,34E-02	-6,55E+02
ADP - MM	kg Sb eq	7,53E-04	7,60E-06	5,46E-05	6,39E-08	7,60E-06	4,11E-07	3,54E-09	-4,45E-04
PERE	MJ	1,33E+02	6,57E-01	1,63E+00	1,66E-02	6,57E-01	8,39E-01	6,99E-04	-7,31E+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
PERT	MJ	1,33E+02	6,57E-01	1,63E+00	1,66E-02	6,57E-01	8,39E-01	6,99E-04	-7,31E+01
PENRE	MJ	1,22E+03	2,22E+01	6,38E+00	-6,18E+01	6,46E+00	9,32E+00	4,15E-02	-7,60E+02
PENRM	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
PENRT	MJ	1,22E+03	2,22E+01	6,38E+00	-6,18E+01	6,46E+00	9,32E+00	4,15E-02	-7,60E+02
SM	kg	1,25E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,23E-03	0,00E+00	-1,15E+01
RSF	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
NRSF	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
FW	m ³	6,76E-01	5,55E-03	3,68E-03	2,07E-04	5,55E-03	2,07E-03	6,77E-05	-7,23E-01
HW	kg	6,84E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,40E-04	0,00E+00	-4,56E-01
NHW	kg	8,46E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,25E-05	0,00E+00	-4,58E-02
RW	kg	1,33E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,30E-05	0,00E+00	-5,24E-03
REUSE	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
RECYCLE	kg	2,70E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,61E-03	0,00E+00	-3,15E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL3N_MAR

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,12E+02	2,44E+00	4,37E-01	1,89E-01	2,44E+00	6,73E-01	2,63E-03	-6,40E+01
GWP - fossil	kg CO ₂ eq	1,16E+02	2,44E+00	4,28E-01	1,89E-01	2,44E+00	6,73E-01	2,62E-03	-6,38E+01
GWP - biogenic	kg CO ₂ eq	-3,81E+00	2,21E-03	7,63E-03	4,33E-05	2,21E-03	-2,34E-04	1,50E-06	-1,36E-01
GWP - luluc	kg CO ₂ eq	7,84E-02	1,18E-03	8,96E-04	2,12E-05	1,18E-03	8,32E-05	1,58E-06	-4,24E-02
GWP - GHG	kg CO ₂ eq	1,17E+02	2,45E+00	4,31E-01	1,89E-01	2,45E+00	6,75E-01	2,64E-03	-6,40E+01
ODP	kg CFC-11 eq	3,67E-06	5,31E-08	7,59E-09	3,00E-09	5,31E-08	1,44E-08	7,60E-11	-1,12E-06
POCP	kg NMVOC eq	4,65E-01	1,19E-02	1,90E-03	2,61E-03	1,19E-02	1,99E-03	2,83E-05	-3,04E-01
AP	mol H+ eq	4,81E-01	7,95E-03	5,46E-03	1,75E-03	7,95E-03	2,28E-03	1,98E-05	-2,89E-01
EP - freshwater	kg P eq	3,57E-02	1,71E-04	5,36E-04	5,79E-06	1,71E-04	9,22E-05	2,19E-07	-3,11E-02
EP - marine	kg N eq	1,17E-01	2,74E-03	5,41E-04	8,10E-04	2,74E-03	4,09E-04	7,59E-06	-6,61E-02
EP - terrestrial	mol N eq	1,22E+00	2,89E-02	5,94E-03	8,81E-03	2,89E-02	4,38E-03	8,14E-05	-6,71E-01
WDP	m ³ depriv.	2,84E+01	1,41E-01	1,38E-01	5,32E-03	1,41E-01	5,47E-02	2,89E-03	4,67E+00
ADP - F	MJ	1,16E+03	3,46E+01	7,25E+00	2,47E+00	3,46E+01	9,65E+00	6,54E-02	-6,75E+02
ADP - MM	kg Sb eq	8,99E-04	7,83E-06	5,46E-05	6,58E-08	7,83E-06	4,24E-07	3,64E-09	-4,59E-04
PERE	MJ	1,45E+02	6,77E-01	1,63E+00	1,71E-02	6,77E-01	8,65E-01	7,21E-04	-7,54E+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
PERT	MJ	1,45E+02	6,77E-01	1,63E+00	1,71E-02	6,77E-01	8,65E-01	7,21E-04	-7,54E+01
PENRE	MJ	1,31E+03	2,29E+01	6,38E+00	-6,37E+01	1,28E+00	9,61E+00	4,28E-02	-7,84E+02
PENRM	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
PENRT	MJ	1,31E+03	2,29E+01	6,38E+00	-6,37E+01	1,28E+00	9,61E+00	4,28E-02	-7,84E+02
SM	kg	1,26E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,27E-03	0,00E+00	-1,18E+01
RSF	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
NRSF	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
FW	m ³	8,58E-01	5,72E-03	3,68E-03	2,14E-04	5,72E-03	2,13E-03	6,98E-05	-7,46E-01
HW	kg	7,45E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	4,54E-04	0,00E+00	-4,70E-01
NHW	kg	1,09E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,32E-05	0,00E+00	-4,72E-02
RW	kg	1,43E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,53E-05	0,00E+00	-5,40E-03
REUSE	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
RECYCLE	kg	2,94E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,66E-03	0,00E+00	-3,25E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H2BL2N+2N_W2_2015

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,25E+02	2,90E+00	4,91E-01	2,24E-01	2,90E+00	7,99E-01	3,12E-03	-7,60E+01
GWP - fossil	kg CO ₂ eq	1,32E+02	2,90E+00	4,82E-01	2,24E-01	2,90E+00	8,00E-01	3,12E-03	-7,58E+01
GWP - biogenic	kg CO ₂ eq	-6,94E+00	2,62E-03	8,58E-03	5,14E-05	2,62E-03	-2,78E-04	1,79E-06	-1,62E-01
GWP - luluc	kg CO ₂ eq	8,77E-02	1,41E-03	1,01E-03	2,52E-05	1,41E-03	9,89E-05	1,88E-06	-5,03E-02
GWP - GHG	kg CO ₂ eq	1,32E+02	2,91E+00	4,85E-01	2,24E-01	2,91E+00	8,02E-01	3,13E-03	-7,60E+01
ODP	kg CFC-11 eq	4,36E-06	6,31E-08	8,54E-09	3,56E-09	6,31E-08	1,71E-08	9,03E-11	-1,33E-06
POCP	kg NMVOC eq	5,35E-01	1,41E-02	2,13E-03	3,10E-03	1,41E-02	2,36E-03	3,36E-05	-3,61E-01
AP	mol H+ eq	5,41E-01	9,45E-03	6,14E-03	2,08E-03	9,45E-03	2,71E-03	2,35E-05	-3,43E-01
EP - freshwater	kg P eq	4,01E-02	2,03E-04	6,03E-04	6,88E-06	2,03E-04	1,10E-04	2,60E-07	-3,69E-02
EP - marine	kg N eq	1,31E-01	3,25E-03	6,09E-04	9,62E-04	3,25E-03	4,85E-04	9,02E-06	-7,85E-02
EP - terrestrial	mol N eq	1,39E+00	3,43E-02	6,69E-03	1,05E-02	3,43E-02	5,21E-03	9,67E-05	-7,97E-01
WDP	m ³ depriv.	3,63E+01	1,67E-01	1,55E-01	6,32E-03	1,67E-01	6,49E-02	3,43E-03	5,55E+00
ADP - F	MJ	1,30E+03	4,11E+01	8,16E+00	2,93E+00	4,11E+01	1,15E+01	7,77E-02	-8,02E+02
ADP - MM	kg Sb eq	8,74E-04	9,30E-06	6,15E-05	7,82E-08	9,30E-06	5,03E-07	4,33E-09	-5,45E-04
PERE	MJ	1,60E+02	8,04E-01	1,83E+00	2,03E-02	8,04E-01	1,03E+00	8,56E-04	-8,95E+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
PERT	MJ	1,60E+02	8,04E-01	1,83E+00	2,03E-02	8,04E-01	1,03E+00	8,56E-04	-8,95E+01
PENRE	MJ	1,48E+03	2,72E+01	7,17E+00	-7,56E+01	1,10E+01	1,14E+01	5,08E-02	-9,31E+02
PENRM	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
PENRT	MJ	1,48E+03	2,72E+01	7,17E+00	-7,56E+01	1,10E+01	1,14E+01	5,08E-02	-9,31E+02
SM	kg	1,52E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,51E-03	0,00E+00	-1,40E+01
RSF	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
NRSF	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
FW	m ³	7,63E-01	6,80E-03	4,14E-03	2,54E-04	6,80E-03	2,53E-03	8,29E-05	-8,85E-01
HW	kg	8,15E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,39E-04	0,00E+00	-5,58E-01
NHW	kg	9,40E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,76E-05	0,00E+00	-5,61E-02
RW	kg	1,59E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,94E-05	0,00E+00	-6,41E-03
REUSE	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
RECYCLE	kg	3,22E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,97E-03	0,00E+00	-3,86E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H3BL_MAR_2009

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,37E+02	2,69E+00	4,37E-01	2,08E-01	2,69E+00	7,41E-01	2,89E-03	-7,05E+01
GWP - fossil	kg CO ₂ eq	1,38E+02	2,69E+00	4,28E-01	2,08E-01	2,69E+00	7,41E-01	2,89E-03	-7,03E+01
GWP - biogenic	kg CO ₂ eq	-1,25E+00	2,43E-03	7,63E-03	4,77E-05	2,43E-03	-2,58E-04	1,66E-06	-1,50E-01
GWP - luluc	kg CO ₂ eq	9,78E-02	1,30E-03	8,96E-04	2,34E-05	1,30E-03	9,17E-05	1,75E-06	-4,67E-02
GWP - GHG	kg CO ₂ eq	1,40E+02	2,69E+00	4,31E-01	2,08E-01	2,69E+00	7,43E-01	2,90E-03	-7,06E+01
ODP	kg CFC-11 eq	3,81E-06	5,85E-08	7,59E-09	3,30E-09	5,85E-08	1,59E-08	8,37E-11	-1,23E-06
POCP	kg NMVOC eq	5,75E-01	1,31E-02	1,90E-03	2,87E-03	1,31E-02	2,19E-03	3,12E-05	-3,35E-01
AP	mol H+ eq	5,92E-01	8,76E-03	5,46E-03	1,92E-03	8,76E-03	2,51E-03	2,18E-05	-3,18E-01
EP - freshwater	kg P eq	4,83E-02	1,88E-04	5,36E-04	6,38E-06	1,88E-04	1,02E-04	2,41E-07	-3,43E-02
EP - marine	kg N eq	1,42E-01	3,01E-03	5,41E-04	8,92E-04	3,01E-03	4,50E-04	8,36E-06	-7,29E-02
EP - terrestrial	mol N eq	1,46E+00	3,18E-02	5,94E-03	9,70E-03	3,18E-02	4,83E-03	8,96E-05	-7,40E-01
WDP	m ³ depriv.	2,32E+01	1,55E-01	1,38E-01	5,86E-03	1,55E-01	6,02E-02	3,18E-03	5,15E+00
ADP - F	MJ	1,45E+03	3,81E+01	7,25E+00	2,72E+00	3,81E+01	1,06E+01	7,20E-02	-7,44E+02
ADP - MM	kg Sb eq	1,29E-03	8,63E-06	5,46E-05	7,25E-08	8,63E-06	4,67E-07	4,01E-09	-5,06E-04
PERE	MJ	1,77E+02	7,46E-01	1,63E+00	1,88E-02	7,46E-01	9,53E-01	7,94E-04	-8,31E+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
PERT	MJ	1,77E+02	7,46E-01	1,63E+00	1,88E-02	7,46E-01	9,53E-01	7,94E-04	-8,31E+01
PENRE	MJ	1,60E+03	2,52E+01	6,38E+00	-7,02E+01	9,20E+00	1,06E+01	4,71E-02	-8,64E+02
PENRM	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
PENRT	MJ	1,60E+03	2,52E+01	6,38E+00	-7,02E+01	9,20E+00	1,06E+01	4,71E-02	-8,64E+02
SM	kg	1,02E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,40E-03	0,00E+00	-1,30E+01
RSF	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
NRSF	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
FW	m ³	1,48E+00	6,30E-03	3,68E-03	2,35E-04	6,30E-03	2,35E-03	7,69E-05	-8,22E-01
HW	kg	7,51E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,00E-04	0,00E+00	-5,18E-01
NHW	kg	1,51E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,56E-05	0,00E+00	-5,20E-02
RW	kg	1,41E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,29E-05	0,00E+00	-5,95E-03
REUSE	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
RECYCLE	kg	2,98E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,82E-03	0,00E+00	-3,58E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H3BL_MAR_W5_2013

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,64E+02	2,83E+00	4,37E-01	2,19E-01	2,83E+00	7,80E-01	3,05E-03	-7,37E+01
GWP - fossil	kg CO ₂ eq	1,65E+02	2,83E+00	4,28E-01	2,19E-01	2,83E+00	7,80E-01	3,04E-03	-7,34E+01
GWP - biogenic	kg CO ₂ eq	-4,85E-01	2,56E-03	7,63E-03	5,02E-05	2,56E-03	-2,71E-04	1,74E-06	-1,57E-01
GWP - luluc	kg CO ₂ eq	1,28E-01	1,37E-03	8,96E-04	2,46E-05	1,37E-03	9,65E-05	1,84E-06	-4,88E-02
GWP - GHG	kg CO ₂ eq	1,68E+02	2,84E+00	4,31E-01	2,19E-01	2,84E+00	7,83E-01	3,06E-03	-7,37E+01
ODP	kg CFC-11 eq	4,20E-06	6,16E-08	7,59E-09	3,48E-09	6,16E-08	1,67E-08	8,82E-11	-1,29E-06
POCP	kg NMVOC eq	6,81E-01	1,38E-02	1,90E-03	3,02E-03	1,38E-02	2,30E-03	3,28E-05	-3,50E-01
AP	mol H+ eq	7,03E-01	9,22E-03	5,46E-03	2,03E-03	9,22E-03	2,65E-03	2,29E-05	-3,32E-01
EP - freshwater	kg P eq	5,99E-02	1,98E-04	5,36E-04	6,71E-06	1,98E-04	1,07E-04	2,53E-07	-3,58E-02
EP - marine	kg N eq	1,67E-01	3,17E-03	5,41E-04	9,39E-04	3,17E-03	4,74E-04	8,80E-06	-7,61E-02
EP - terrestrial	mol N eq	1,71E+00	3,35E-02	5,94E-03	1,02E-02	3,35E-02	5,08E-03	9,43E-05	-7,73E-01
WDP	m ³ depriv.	2,44E+01	1,63E-01	1,38E-01	6,17E-03	1,63E-01	6,34E-02	3,35E-03	5,38E+00
ADP - F	MJ	1,78E+03	4,01E+01	7,25E+00	2,86E+00	4,01E+01	1,12E+01	7,58E-02	-7,77E+02
ADP - MM	kg Sb eq	1,53E-03	9,08E-06	5,46E-05	7,63E-08	9,08E-06	4,91E-07	4,23E-09	-5,28E-04
PERE	MJ	2,12E+02	7,85E-01	1,63E+00	1,98E-02	7,85E-01	1,00E+00	8,36E-04	-8,68E+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
PERT	MJ	2,12E+02	7,85E-01	1,63E+00	1,98E-02	7,85E-01	1,00E+00	8,36E-04	-8,68E+01
PENRE	MJ	1,95E+03	2,65E+01	6,38E+00	-7,33E+01	1,09E+01	1,11E+01	4,96E-02	-9,03E+02
PENRM	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
PENRT	MJ	1,95E+03	2,65E+01	6,38E+00	-7,33E+01	1,09E+01	1,11E+01	4,96E-02	-9,03E+02
SM	kg	9,89E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,48E-03	0,00E+00	-1,36E+01
RSF	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
NRSF	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
FW	m ³	1,82E+00	6,63E-03	3,68E-03	2,48E-04	6,63E-03	2,47E-03	8,09E-05	-8,58E-01
HW	kg	6,09E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,26E-04	0,00E+00	-5,41E-01
NHW	kg	9,36E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,69E-05	0,00E+00	-5,44E-02
RW	kg	1,17E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,73E-05	0,00E+00	-6,22E-03
REUSE	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
RECYCLE	kg	2,58E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,92E-03	0,00E+00	-3,74E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H3BL_MAR_2011

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,48E+02	2,87E+00	4,37E-01	2,21E-01	2,87E+00	7,90E-01	3,08E-03	-7,51E+01
GWP - fossil	kg CO ₂ eq	1,48E+02	2,86E+00	4,28E-01	2,21E-01	2,86E+00	7,90E-01	3,08E-03	-7,49E+01
GWP - biogenic	kg CO ₂ eq	-7,70E-01	2,59E-03	7,63E-03	5,08E-05	2,59E-03	-2,75E-04	1,76E-06	-1,60E-01
GWP - luluc	kg CO ₂ eq	1,06E-01	1,39E-03	8,96E-04	2,49E-05	1,39E-03	9,77E-05	1,86E-06	-4,98E-02
GWP - GHG	kg CO ₂ eq	1,51E+02	2,87E+00	4,31E-01	2,22E-01	2,87E+00	7,92E-01	3,09E-03	-7,52E+01
ODP	kg CFC-11 eq	4,01E-06	6,23E-08	7,59E-09	3,52E-09	6,23E-08	1,69E-08	8,92E-11	-1,31E-06
POCP	kg NMVOC eq	6,23E-01	1,39E-02	1,90E-03	3,06E-03	1,39E-02	2,33E-03	3,32E-05	-3,57E-01
AP	mol H+ eq	6,40E-01	FALSO	5,46E-03	2,05E-03	9,34E-03	2,68E-03	2,32E-05	-3,39E-01
EP - freshwater	kg P eq	5,29E-02	2,00E-04	5,36E-04	6,79E-06	2,00E-04	1,08E-04	2,57E-07	-3,65E-02
EP - marine	kg N eq	1,53E-01	3,21E-03	5,41E-04	9,51E-04	3,21E-03	4,80E-04	8,91E-06	-7,76E-02
EP - terrestrial	mol N eq	1,57E+00	3,39E-02	5,94E-03	1,03E-02	3,39E-02	5,15E-03	9,55E-05	-7,88E-01
WDP	m ³ depriv.	2,32E+01	1,65E-01	1,38E-01	6,25E-03	1,65E-01	6,42E-02	3,39E-03	5,49E+00
ADP - F	MJ	1,57E+03	4,06E+01	7,25E+00	2,90E+00	4,06E+01	1,13E+01	7,68E-02	-7,93E+02
ADP - MM	kg Sb eq	1,43E-03	9,19E-06	5,46E-05	7,73E-08	9,19E-06	4,97E-07	4,28E-09	-5,39E-04
PERE	MJ	1,91E+02	7,95E-01	1,63E+00	2,01E-02	7,95E-01	1,02E+00	8,46E-04	-8,86E+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
PERT	MJ	1,91E+02	7,95E-01	1,63E+00	2,01E-02	7,95E-01	1,02E+00	8,46E-04	-8,86E+01
PENRE	MJ	1,73E+03	2,69E+01	6,38E+00	-7,48E+01	1,09E+01	1,13E+01	5,02E-02	-9,21E+02
PENRM	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
PENRT	MJ	1,73E+03	2,69E+01	6,38E+00	-7,48E+01	1,09E+01	1,13E+01	5,02E-02	-9,21E+02
SM	kg	1,03E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,49E-03	0,00E+00	-1,39E+01
RSF	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
NRSF	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
FW	m ³	1,68E+00	6,71E-03	3,68E-03	2,51E-04	6,71E-03	2,50E-03	8,19E-05	-8,76E-01
HW	kg	7,96E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,33E-04	0,00E+00	-5,52E-01
NHW	kg	1,67E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,73E-05	0,00E+00	-5,55E-02
RW	kg	1,48E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	8,83E-05	0,00E+00	-6,34E-03
REUSE	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
RECYCLE	kg	3,14E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,94E-03	0,00E+00	-3,81E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H4BL_MAR_W5_2013

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,89E+02	3,34E+00	4,37E-01	2,58E-01	3,34E+00	9,19E-01	3,59E-03	-8,75E+01
GWP - fossil	kg CO ₂ eq	1,90E+02	3,33E+00	4,28E-01	2,58E-01	3,33E+00	9,19E-01	3,58E-03	-8,73E+01
GWP - biogenic	kg CO ₂ eq	-8,11E-01	3,01E-03	7,63E-03	5,91E-05	3,01E-03	-3,20E-04	2,05E-06	-1,86E-01
GWP - luluc	kg CO ₂ eq	1,46E-01	1,62E-03	8,96E-04	2,90E-05	1,62E-03	1,14E-04	2,16E-06	-5,80E-02
GWP - GHG	kg CO ₂ eq	1,93E+02	3,34E+00	4,31E-01	2,58E-01	3,34E+00	9,22E-01	3,60E-03	-8,76E+01
ODP	kg CFC-11 eq	4,95E-06	7,25E-08	7,59E-09	4,10E-09	7,25E-08	1,97E-08	1,04E-10	-1,53E-06
POCP	kg NMVOC eq	7,84E-01	1,62E-02	1,90E-03	3,56E-03	1,62E-02	2,71E-03	3,87E-05	-4,16E-01
AP	mol H ⁺ eq	8,11E-01	1,09E-02	5,46E-03	2,39E-03	1,09E-02	3,12E-03	2,70E-05	-3,95E-01
EP - freshwater	kg P eq	6,81E-02	2,33E-04	5,36E-04	7,91E-06	2,33E-04	1,26E-04	2,99E-07	-4,25E-02
EP - marine	kg N eq	1,93E-01	3,74E-03	5,41E-04	1,11E-03	3,74E-03	5,58E-04	1,04E-05	-9,04E-02
EP - terrestrial	mol N eq	1,98E+00	3,95E-02	5,94E-03	1,20E-02	3,95E-02	5,99E-03	1,11E-04	-9,18E-01
WDP	m ³ depriv.	2,95E+01	1,93E-01	1,38E-01	7,27E-03	1,93E-01	7,47E-02	3,95E-03	6,39E+00
ADP - F	MJ	2,04E+03	4,72E+01	7,25E+00	3,37E+00	4,72E+01	1,32E+01	8,93E-02	-9,24E+02
ADP - MM	kg Sb eq	1,77E-03	1,07E-05	5,46E-05	8,99E-08	1,07E-05	5,79E-07	4,98E-09	-6,28E-04
PERE	MJ	2,44E+02	9,25E-01	1,63E+00	2,34E-02	9,25E-01	1,18E+00	9,84E-04	-1,03E+02
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	2,44E+02	9,25E-01	1,63E+00	2,34E-02	9,25E-01	1,18E+00	9,84E-04	-1,03E+02
PENRE	MJ	2,24E+03	3,12E+01	6,38E+00	-8,71E+01	1,01E+01	1,31E+01	5,84E-02	-1,07E+03
PENRM	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
PENRT	MJ	2,24E+03	3,12E+01	6,38E+00	-8,71E+01	1,01E+01	1,31E+01	5,84E-02	-1,07E+03
SM	kg	1,22E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,74E-03	0,00E+00	-1,62E+01
RSF	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
NRSF	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
FW	m ³	2,06E+00	7,81E-03	3,68E-03	2,92E-04	7,81E-03	2,91E-03	9,53E-05	-1,02E+00
HW	kg	7,72E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,20E-04	0,00E+00	-6,43E-01
NHW	kg	1,24E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,17E-05	0,00E+00	-6,46E-02
RW	kg	1,47E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,03E-04	0,00E+00	-7,39E-03
REUSE	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
RECYCLE	kg	3,23E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,26E-03	0,00E+00	-4,44E+01
EN-REC	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
EE-E	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
EE-T	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

SINGLE SIDED BARRIERS FOR GROUND

GALVANIZED STEEL BARRIER

H3BL_W6_A60_P1125

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	2,07E+02	4,15E+00	4,37E-01	3,21E-01	4,15E+00	1,14E+00	4,47E-03	-1,09E+02
GWP - fossil	kg CO ₂ eq	2,10E+02	4,15E+00	4,28E-01	3,21E-01	4,15E+00	1,14E+00	4,46E-03	-1,08E+02
GWP - biogenic	kg CO ₂ eq	-2,62E+00	3,75E-03	7,63E-03	7,35E-05	3,75E-03	-3,98E-04	2,55E-06	-2,32E-01
GWP - luluc	kg CO ₂ eq	1,48E-01	2,01E-03	8,96E-04	3,61E-05	2,01E-03	1,41E-04	2,69E-06	-7,21E-02
GWP - GHG	kg CO ₂ eq	2,13E+02	4,16E+00	4,31E-01	3,21E-01	4,16E+00	1,15E+00	4,48E-03	-1,09E+02
ODP	kg CFC-11 eq	5,96E-06	9,02E-08	7,59E-09	5,10E-09	9,02E-08	2,45E-08	1,29E-10	-1,90E-06
POCP	kg NMVOC eq	8,70E-01	2,02E-02	1,90E-03	4,43E-03	2,02E-02	3,37E-03	4,81E-05	-5,17E-01
AP	mol H ⁺ eq	8,98E-01	1,35E-02	5,46E-03	2,97E-03	1,35E-02	3,88E-03	3,36E-05	-4,91E-01
EP - freshwater	kg P eq	7,20E-02	2,90E-04	5,36E-04	9,84E-06	2,90E-04	1,57E-04	3,71E-07	-5,29E-02
EP - marine	kg N eq	2,16E-01	4,65E-03	5,41E-04	1,38E-03	4,65E-03	6,95E-04	1,29E-05	-1,12E-01
EP - terrestrial	mol N eq	2,22E+00	4,91E-02	5,94E-03	1,50E-02	4,91E-02	7,45E-03	1,38E-04	-1,14E+00
WDP	m ³ depriv.	3,78E+01	2,40E-01	1,38E-01	9,05E-03	2,40E-01	9,29E-02	4,91E-03	7,94E+00
ADP - F	MJ	2,18E+03	5,88E+01	7,25E+00	4,20E+00	5,88E+01	1,64E+01	1,11E-01	-1,15E+03
ADP - MM	kg Sb eq	1,93E-03	1,33E-05	5,46E-05	1,12E-07	1,33E-05	7,20E-07	6,19E-09	-7,80E-04
PERE	MJ	2,69E+02	1,15E+00	1,63E+00	2,91E-02	1,15E+00	1,47E+00	1,23E-03	-1,28E+02
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	2,69E+02	1,15E+00	1,63E+00	2,91E-02	1,15E+00	1,47E+00	1,23E-03	-1,28E+02
PENRE	MJ	2,43E+03	3,89E+01	6,38E+00	-1,08E+02	1,01E+01	1,63E+01	7,26E-02	-1,33E+03
PENRM	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
PENRT	MJ	2,43E+03	3,89E+01	6,38E+00	-1,08E+02	1,01E+01	1,63E+01	7,26E-02	-1,33E+03
SM	kg	1,67E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,16E-03	0,00E+00	-2,01E+01
RSF	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
NRSF	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
FW	m ³	2,15E+00	9,72E-03	3,68E-03	3,63E-04	9,72E-03	3,63E-03	1,19E-04	-1,27E+00
HW	kg	1,20E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	7,72E-04	0,00E+00	-8,00E-01
NHW	kg	2,30E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,95E-05	0,00E+00	-8,03E-02
RW	kg	2,26E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,28E-04	0,00E+00	-9,18E-03
REUSE	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
RECYCLE	kg	4,75E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,81E-03	0,00E+00	-5,52E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE

CORTEN STEEL BARRIER

H2BPW4_MARC_2020

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,04E+02	1,52E+00	4,41E-01	1,18E-01	1,52E+00	4,20E-01	1,64E-03	-3,99E+01
GWP - fossil	kg CO ₂ eq	1,08E+02	1,52E+00	4,32E-01	1,18E-01	1,52E+00	4,20E-01	1,64E-03	-3,98E+01
GWP - biogenic	kg CO ₂ eq	-3,49E+00	1,38E-03	7,63E-03	2,70E-05	1,38E-03	-1,46E-04	9,37E-07	-8,50E-02
GWP - luluc	kg CO ₂ eq	7,74E-02	7,39E-04	8,96E-04	1,32E-05	7,39E-04	5,19E-05	9,88E-07	-2,64E-02
GWP - GHG	kg CO ₂ eq	1,09E+02	1,53E+00	4,35E-01	1,18E-01	1,53E+00	4,21E-01	1,64E-03	-3,99E+01
ODP	kg CFC-11 eq	3,32E-06	3,31E-08	7,68E-09	1,87E-09	3,31E-08	8,99E-09	4,74E-11	-6,96E-07
POCP	kg NMVOC eq	4,34E-01	7,41E-03	1,91E-03	1,63E-03	7,41E-03	1,24E-03	1,77E-05	-1,90E-01
AP	mol H ⁺ eq	4,46E-01	4,96E-03	5,47E-03	1,09E-03	4,96E-03	1,42E-03	1,23E-05	-1,80E-01
EP - freshwater	kg P eq	3,43E-02	1,06E-04	5,36E-04	3,61E-06	1,06E-04	5,75E-05	1,36E-07	-1,94E-02
EP - marine	kg N eq	1,08E-01	1,71E-03	5,44E-04	5,05E-04	1,71E-03	2,55E-04	4,74E-06	-4,12E-02
EP - terrestrial	mol N eq	1,12E+00	1,80E-02	5,97E-03	5,49E-03	1,80E-02	2,73E-03	5,08E-05	-4,19E-01
WDP	m ³ depriv.	2,38E+01	8,79E-02	1,38E-01	3,32E-03	8,79E-02	3,41E-02	1,80E-03	2,91E+00
ADP - F	MJ	1,11E+03	2,16E+01	7,31E+00	1,54E+00	2,16E+01	6,02E+00	4,08E-02	-4,21E+02
ADP - MM	kg Sb eq	7,37E-04	4,89E-06	5,46E-05	4,11E-08	4,89E-06	2,64E-07	2,27E-09	-2,86E-04
PERE	MJ	1,09E+02	3,39E-01	1,29E+00	8,88E-03	3,39E-01	2,28E-01	3,53E-04	-3,92E+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
PERT	MJ	1,09E+02	3,39E-01	1,29E+00	8,88E-03	3,39E-01	2,28E-01	3,53E-04	-3,92E+01
PENRE	MJ	1,23E+03	1,44E+01	6,43E+00	-6,87E+00	2,63E+01	6,07E+00	2,21E-01	-4,89E+02
PENRM	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
PENRT	MJ	1,23E+03	1,44E+01	6,43E+00	-6,87E+00	2,63E+01	6,07E+00	2,21E-01	-4,89E+02
SM	kg	1,01E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	7,94E-04	0,00E+00	-7,38E+00
RSF	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
NRSF	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
FW	m ³	8,32E-01	3,57E-03	3,69E-03	1,33E-04	3,57E-03	1,33E-03	4,35E-05	-4,65E-01
HW	kg	5,80E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	2,83E-04	0,00E+00	-2,93E-01
NHW	kg	7,45E-02	0,00E+00	1,42E-07	0,00E+00	0,00E+00	1,45E-05	0,00E+00	-2,95E-02
RW	kg	1,12E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	4,69E-05	0,00E+00	-3,37E-03
REUSE	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
RECYCLE	kg	2,35E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	1,03E-03	0,00E+00	-2,03E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE

CORTEN STEEL BARRIER

H2BPW4_MARC_2021

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,04E+02	2,06E+00	4,41E-01	1,59E-01	2,06E+00	5,66E-01	2,21E-03	-5,39E+01
GWP - fossil	kg CO ₂ eq	1,08E+02	2,05E+00	4,32E-01	1,59E-01	2,05E+00	5,66E-01	2,21E-03	-5,37E+01
GWP - biogenic	kg CO ₂ eq	-3,49E+00	1,86E-03	7,63E-03	3,64E-05	1,86E-03	-1,97E-04	1,26E-06	-1,15E-01
GWP - luluc	kg CO ₂ eq	7,74E-02	9,97E-04	8,96E-04	1,79E-05	9,97E-04	7,00E-05	1,33E-06	-3,57E-02
GWP - GHG	kg CO ₂ eq	1,09E+02	2,06E+00	4,35E-01	1,59E-01	2,06E+00	5,68E-01	2,22E-03	-5,39E+01
ODP	kg CFC-11 eq	3,32E-06	4,47E-08	7,68E-09	2,52E-09	4,47E-08	1,21E-08	6,40E-11	-9,40E-07
POCP	kg NMVOC eq	4,34E-01	1,00E-02	1,91E-03	2,20E-03	1,00E-02	1,67E-03	2,38E-05	-2,56E-01
AP	mol H ⁺ eq	4,46E-01	6,69E-03	5,47E-03	1,47E-03	6,69E-03	1,92E-03	1,66E-05	-2,43E-01
EP - freshwater	kg P eq	3,43E-02	1,44E-04	5,36E-04	4,87E-06	1,44E-04	7,76E-05	1,84E-07	-2,62E-02
EP - marine	kg N eq	1,08E-01	2,30E-03	5,44E-04	6,82E-04	2,30E-03	3,44E-04	6,39E-06	-5,57E-02
EP - terrestrial	mol N eq	1,12E+00	2,43E-02	5,97E-03	7,41E-03	2,43E-02	3,69E-03	6,85E-05	-5,65E-01
WDP	m ³ depriv.	2,38E+01	1,19E-01	1,38E-01	4,48E-03	1,19E-01	4,60E-02	2,43E-03	3,93E+00
ADP - F	MJ	1,11E+03	2,91E+01	7,31E+00	2,08E+00	2,91E+01	8,13E+00	5,50E-02	-5,69E+02
ADP - MM	kg Sb eq	7,37E-04	6,59E-06	5,46E-05	5,54E-08	6,59E-06	3,56E-07	3,07E-09	-3,87E-04
PERE	MJ	1,09E+02	4,57E-01	1,29E+00	1,20E-02	4,57E-01	3,07E-01	4,76E-04	-5,29E+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
PERT	MJ	1,09E+02	4,57E-01	1,29E+00	1,20E-02	4,57E-01	3,07E-01	4,76E-04	-5,29E+01
PENRE	MJ	1,23E+03	1,94E+01	6,43E+00	-9,28E+00	3,12E+01	8,19E+00	2,30E-01	-6,60E+02
PENRM	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
PENRT	MJ	1,23E+03	1,94E+01	6,43E+00	-9,28E+00	3,12E+01	8,19E+00	2,30E-01	-6,60E+02
SM	kg	1,01E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	1,07E-03	0,00E+00	-9,96E+00
RSF	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
NRSF	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
FW	m ³	8,32E-01	4,81E-03	3,69E-03	1,80E-04	4,81E-03	1,80E-03	5,87E-05	-6,28E-01
HW	kg	5,80E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	3,82E-04	0,00E+00	-3,96E-01
NHW	kg	7,45E-02	0,00E+00	1,42E-07	0,00E+00	0,00E+00	1,96E-05	0,00E+00	-3,98E-02
RW	kg	1,12E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	6,33E-05	0,00E+00	-4,55E-03
REUSE	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
RECYCLE	kg	2,35E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	1,39E-03	0,00E+00	-2,74E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H2BPW4_MARC_2020

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	7,26E+01	1,52E+00	4,41E-01	1,22E-01	1,52E+00	4,35E-01	1,70E-03	-4,14E+01
GWP - fossil	kg CO ₂ eq	7,57E+01	1,52E+00	4,32E-01	1,22E-01	1,52E+00	4,36E-01	1,70E-03	-4,13E+01
GWP - biogenic	kg CO ₂ eq	-3,13E+00	1,38E-03	7,63E-03	2,80E-05	1,38E-03	-1,52E-04	9,73E-07	-8,81E-02
GWP - luluc	kg CO ₂ eq	5,10E-02	7,39E-04	8,96E-04	1,37E-05	7,39E-04	5,39E-05	1,03E-06	-2,74E-02
GWP - GHG	kg CO ₂ eq	7,63E+01	1,53E+00	4,35E-01	1,22E-01	1,53E+00	4,37E-01	1,71E-03	-4,14E+01
ODP	kg CFC-11 eq	2,45E-06	3,31E-08	7,68E-09	1,94E-09	3,31E-08	9,32E-09	4,92E-11	-7,22E-07
POCP	kg NMVOC eq	3,09E-01	7,41E-03	1,91E-03	1,69E-03	7,41E-03	1,28E-03	1,83E-05	-1,97E-01
AP	mol H+ eq	3,13E-01	4,96E-03	5,47E-03	1,13E-03	4,96E-03	1,48E-03	1,28E-05	-1,87E-01
EP - freshwater	kg P eq	2,35E-02	1,06E-04	5,36E-04	3,75E-06	1,06E-04	5,97E-05	1,41E-07	-2,01E-02
EP - marine	kg N eq	7,61E-02	1,71E-03	5,44E-04	5,24E-04	1,71E-03	2,64E-04	4,91E-06	-4,28E-02
EP - terrestrial	mol N eq	7,98E-01	1,80E-02	5,97E-03	5,70E-03	1,80E-02	2,84E-03	5,27E-05	-4,34E-01
WDP	m ³ depriv.	1,92E+01	8,79E-02	1,38E-01	3,44E-03	8,79E-02	3,54E-02	1,87E-03	3,02E+00
ADP - F	MJ	7,70E+02	2,16E+01	7,31E+00	1,60E+00	2,16E+01	6,25E+00	4,23E-02	-4,37E+02
ADP - MM	kg Sb eq	5,36E-04	4,89E-06	5,46E-05	4,26E-08	4,89E-06	2,74E-07	2,36E-09	-2,97E-04
PERE	MJ	7,52E+01	3,39E-01	1,29E+00	9,22E-03	3,39E-01	2,36E-01	3,66E-04	-4,06E+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
PERT	MJ	7,52E+01	3,39E-01	1,29E+00	9,22E-03	3,39E-01	2,36E-01	3,66E-04	-4,06E+01
PENRE	MJ	8,57E+02	1,44E+01	6,43E+00	-7,13E+00	2,17E+01	6,30E+00	2,22E-01	-5,07E+02
PENRM	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
PENRT	MJ	8,57E+02	1,44E+01	6,43E+00	-7,13E+00	2,17E+01	6,30E+00	2,22E-01	-5,07E+02
SM	kg	8,08E+00	0,00E+00	7,79E-06	0,00E+00	0,00E+00	8,23E-04	0,00E+00	-7,65E+00
RSF	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
NRSF	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
FW	m ³	5,19E-01	3,57E-03	3,69E-03	1,38E-04	3,57E-03	1,38E-03	4,52E-05	-4,82E-01
HW	kg	4,47E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	2,94E-04	0,00E+00	-3,04E-01
NHW	kg	5,80E-02	0,00E+00	1,42E-07	0,00E+00	0,00E+00	1,50E-05	0,00E+00	-3,05E-02
RW	kg	8,69E-03	0,00E+00	4,61E-07	0,00E+00	0,00E+00	4,87E-05	0,00E+00	-3,49E-03
REUSE	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
RECYCLE	kg	1,76E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	1,07E-03	0,00E+00	-2,10E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H2BPW4_MARC_2021

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,10E+02	2,13E+00	4,41E-01	1,65E-01	2,13E+00	5,87E-01	2,29E-03	-5,59E+01
GWP - fossil	kg CO ₂ eq	1,14E+02	2,13E+00	4,32E-01	1,65E-01	2,13E+00	5,87E-01	2,29E-03	-5,57E+01
GWP - biogenic	kg CO ₂ eq	-3,52E+00	1,93E-03	7,63E-03	3,78E-05	1,93E-03	-2,04E-04	1,31E-06	-1,19E-01
GWP - luluc	kg CO ₂ eq	8,21E-02	1,03E-03	8,96E-04	1,85E-05	1,03E-03	7,26E-05	1,38E-06	-3,70E-02
GWP - GHG	kg CO ₂ eq	1,15E+02	2,14E+00	4,35E-01	1,65E-01	2,14E+00	5,89E-01	2,30E-03	-5,59E+01
ODP	kg CFC-11 eq	3,50E-06	4,63E-08	7,68E-09	2,62E-09	4,63E-08	1,26E-08	6,64E-11	-9,75E-07
POCP	kg NMVOC eq	4,59E-01	1,04E-02	1,91E-03	2,28E-03	1,04E-02	1,73E-03	2,47E-05	-2,66E-01
AP	mol H+ eq	5,02E-01	6,94E-03	5,47E-03	1,53E-03	6,94E-03	1,99E-03	1,73E-05	-2,52E-01
EP - freshwater	kg P eq	3,62E-02	1,49E-04	5,36E-04	5,05E-06	1,49E-04	8,05E-05	1,91E-07	-2,72E-02
EP - marine	kg N eq	1,15E-01	2,39E-03	5,44E-04	7,07E-04	2,39E-03	3,57E-04	6,63E-06	-5,77E-02
EP - terrestrial	mol N eq	1,32E+00	2,52E-02	5,97E-03	7,69E-03	2,52E-02	3,83E-03	7,10E-05	-5,86E-01
WDP	m ³ depriv.	2,52E+01	1,23E-01	1,38E-01	4,65E-03	1,23E-01	4,77E-02	2,52E-03	4,08E+00
ADP - F	MJ	1,18E+03	3,02E+01	7,31E+00	2,16E+00	3,02E+01	8,43E+00	5,71E-02	-5,90E+02
ADP - MM	kg Sb eq	8,69E-04	6,84E-06	5,46E-05	5,75E-08	6,84E-06	3,70E-07	3,18E-09	-4,01E-04
PERE	MJ	1,15E+02	4,74E-01	1,29E+00	1,24E-02	4,74E-01	3,18E-01	4,93E-04	-5,48E+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
PERT	MJ	1,15E+02	4,74E-01	1,29E+00	1,24E-02	4,74E-01	3,18E-01	4,93E-04	-5,48E+01
PENRE	MJ	1,30E+03	2,01E+01	6,43E+00	-9,63E+00	3,31E+01	8,50E+00	2,31E-01	-6,85E+02
PENRM	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
PENRT	MJ	1,30E+03	2,01E+01	6,43E+00	-9,63E+00	3,31E+01	8,50E+00	2,31E-01	-6,85E+02
SM	kg	1,07E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	1,11E-03	0,00E+00	-1,03E+01
RSF	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
NRSF	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
FW	m ³	9,07E-01	4,99E-03	3,69E-03	1,87E-04	4,99E-03	1,86E-03	6,09E-05	-6,51E-01
HW	kg	6,12E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	3,96E-04	0,00E+00	-4,11E-01
NHW	kg	7,76E-02	0,00E+00	1,42E-07	0,00E+00	0,00E+00	2,03E-05	0,00E+00	-4,13E-02
RW	kg	1,18E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	6,57E-05	0,00E+00	-4,72E-03
REUSE	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
RECYCLE	kg	2,45E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	1,45E-03	0,00E+00	-2,84E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H2BP_MAR

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,34E+02	2,41E+00	4,41E-01	1,86E-01	2,41E+00	6,62E-01	2,59E-03	-6,30E+01
GWP - fossil	kg CO ₂ eq	1,36E+02	2,40E+00	4,32E-01	1,86E-01	2,40E+00	6,63E-01	2,58E-03	-6,29E+01
GWP - biogenic	kg CO ₂ eq	-3,21E+00	2,17E-03	7,63E-03	4,26E-05	2,17E-03	-2,30E-04	1,48E-06	-1,34E-01
GWP - luluc	kg CO ₂ eq	3,60E-01	1,17E-03	8,96E-04	2,09E-05	1,17E-03	8,19E-05	1,56E-06	-4,18E-02
GWP - GHG	kg CO ₂ eq	1,38E+02	2,41E+00	4,35E-01	1,86E-01	2,41E+00	6,64E-01	2,59E-03	-6,31E+01
ODP	kg CFC-11 eq	4,04E-06	5,23E-08	7,68E-09	2,95E-09	5,23E-08	1,42E-08	7,48E-11	-1,10E-06
POCP	kg NMVOC eq	5,56E-01	1,17E-02	1,91E-03	2,57E-03	1,17E-02	1,95E-03	2,79E-05	-3,00E-01
AP	mol H+ eq	5,94E-01	7,83E-03	5,47E-03	1,72E-03	7,83E-03	2,25E-03	1,95E-05	-2,84E-01
EP - freshwater	kg P eq	4,18E-02	1,68E-04	5,36E-04	5,70E-06	1,68E-04	9,08E-05	2,15E-07	-3,06E-02
EP - marine	kg N eq	1,40E-01	2,69E-03	5,44E-04	7,98E-04	2,69E-03	4,02E-04	7,47E-06	-6,51E-02
EP - terrestrial	mol N eq	1,58E+00	2,84E-02	5,97E-03	8,67E-03	2,84E-02	4,32E-03	8,01E-05	-6,61E-01
WDP	m ³ depriv.	2,79E+01	1,39E-01	1,38E-01	5,24E-03	1,39E-01	5,38E-02	2,84E-03	4,60E+00
ADP - F	MJ	1,45E+03	3,40E+01	7,31E+00	2,43E+00	3,40E+01	9,50E+00	6,44E-02	-6,65E+02
ADP - MM	kg Sb eq	1,07E-03	7,71E-06	5,46E-05	6,48E-08	7,71E-06	4,17E-07	3,59E-09	-4,52E-04
PERE	MJ	1,33E+02	5,35E-01	1,29E+00	1,40E-02	5,35E-01	3,59E-01	5,56E-04	-6,19E+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
PERT	MJ	1,33E+02	5,35E-01	1,29E+00	1,40E-02	5,35E-01	3,59E-01	5,56E-04	-6,19E+01
PENRE	MJ	1,55E+03	2,27E+01	6,43E+00	-1,09E+01	3,66E+01	9,58E+00	2,36E-01	-7,73E+02
PENRM	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
PENRT	MJ	1,55E+03	2,27E+01	6,43E+00	-1,09E+01	3,66E+01	9,58E+00	2,36E-01	-7,73E+02
SM	kg	1,20E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	1,25E-03	0,00E+00	-1,17E+01
RSF	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
NRSF	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
FW	m ³	1,12E+00	5,63E-03	3,69E-03	2,10E-04	5,63E-03	2,10E-03	6,87E-05	-7,35E-01
HW	kg	7,28E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	4,47E-04	0,00E+00	-4,63E-01
NHW	kg	1,05E-01	0,00E+00	1,42E-07	0,00E+00	0,00E+00	2,29E-05	0,00E+00	-4,65E-02
RW	kg	1,40E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	7,41E-05	0,00E+00	-5,32E-03
REUSE	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
RECYCLE	kg	2,92E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	1,63E-03	0,00E+00	-3,20E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H2BP_MAR_2011

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,35E+02	2,42E+00	4,41E-01	1,87E-01	2,42E+00	6,66E-01	2,60E-03	-6,33E+01
GWP - fossil	kg CO ₂ eq	1,37E+02	2,41E+00	4,32E-01	1,87E-01	2,41E+00	6,66E-01	2,60E-03	-6,32E+01
GWP - biogenic	kg CO ₂ eq	-3,18E+00	2,18E-03	7,63E-03	4,28E-05	2,18E-03	-2,32E-04	1,49E-06	-1,35E-01
GWP - luluc	kg CO ₂ eq	3,71E-01	1,17E-03	8,96E-04	2,10E-05	1,17E-03	8,23E-05	1,57E-06	-4,20E-02
GWP - GHG	kg CO ₂ eq	1,40E+02	2,42E+00	4,35E-01	1,87E-01	2,42E+00	6,68E-01	2,61E-03	-6,34E+01
ODP	kg CFC-11 eq	4,07E-06	5,25E-08	7,68E-09	2,97E-09	5,25E-08	1,43E-08	7,52E-11	-1,11E-06
POCP	kg NMVOC eq	5,61E-01	1,18E-02	1,91E-03	2,58E-03	1,18E-02	1,96E-03	2,80E-05	-3,01E-01
AP	mol H+ eq	5,98E-01	7,87E-03	5,47E-03	1,73E-03	7,87E-03	2,26E-03	1,96E-05	-2,86E-01
EP - freshwater	kg P eq	4,21E-02	1,69E-04	5,36E-04	5,73E-06	1,69E-04	9,13E-05	2,16E-07	-3,08E-02
EP - marine	kg N eq	1,41E-01	2,71E-03	5,44E-04	8,02E-04	2,71E-03	4,04E-04	7,51E-06	-6,55E-02
EP - terrestrial	mol N eq	1,59E+00	2,86E-02	5,97E-03	8,71E-03	2,86E-02	4,34E-03	8,05E-05	-6,64E-01
WDP	m ³ depriv.	2,80E+01	1,39E-01	1,38E-01	5,27E-03	1,39E-01	5,41E-02	2,86E-03	4,63E+00
ADP - F	MJ	1,46E+03	3,42E+01	7,31E+00	2,44E+00	3,42E+01	9,55E+00	6,47E-02	-6,69E+02
ADP - MM	kg Sb eq	1,08E-03	7,75E-06	5,46E-05	6,51E-08	7,75E-06	4,19E-07	3,61E-09	-4,54E-04
PERE	MJ	1,34E+02	5,37E-01	1,29E+00	1,41E-02	5,37E-01	3,61E-01	5,59E-04	-6,22E+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
PERT	MJ	1,34E+02	5,37E-01	1,29E+00	1,41E-02	5,37E-01	3,61E-01	5,59E-04	-6,22E+01
PENRE	MJ	1,56E+03	2,28E+01	6,43E+00	-1,09E+01	3,71E+01	9,63E+00	2,36E-01	-7,77E+02
PENRM	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
PENRT	MJ	1,56E+03	2,28E+01	6,43E+00	-1,09E+01	3,71E+01	9,63E+00	2,36E-01	-7,77E+02
SM	kg	1,20E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	1,26E-03	0,00E+00	-1,17E+01
RSF	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
NRSF	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
FW	m ³	1,14E+00	5,66E-03	3,69E-03	2,11E-04	5,66E-03	2,11E-03	6,90E-05	-7,38E-01
HW	kg	7,31E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	4,49E-04	0,00E+00	-4,66E-01
NHW	kg	1,06E-01	0,00E+00	1,42E-07	0,00E+00	0,00E+00	2,30E-05	0,00E+00	-4,68E-02
RW	kg	1,40E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	7,45E-05	0,00E+00	-5,35E-03
REUSE	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
RECYCLE	kg	2,93E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	1,64E-03	0,00E+00	-3,22E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H2BP_MAR_2011_WF

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,48E+02	2,98E+00	4,41E-01	2,30E-01	2,98E+00	8,21E-01	3,20E-03	-7,82E+01
GWP - fossil	kg CO ₂ eq	1,50E+02	2,98E+00	4,32E-01	2,30E-01	2,98E+00	8,21E-01	3,20E-03	-7,79E+01
GWP - biogenic	kg CO ₂ eq	-2,90E+00	2,69E-03	7,63E-03	5,28E-05	2,69E-03	-2,86E-04	1,83E-06	-1,66E-01
GWP - luluc	kg CO ₂ eq	5,27E-01	1,44E-03	8,96E-04	2,59E-05	1,44E-03	1,01E-04	1,93E-06	-5,18E-02
GWP - GHG	kg CO ₂ eq	1,53E+02	2,98E+00	4,35E-01	2,30E-01	2,98E+00	8,23E-01	3,21E-03	-7,82E+01
ODP	kg CFC-11 eq	4,33E-06	6,47E-08	7,68E-09	3,66E-09	6,47E-08	1,76E-08	9,27E-11	-1,36E-06
POCP	kg NMVOC eq	6,20E-01	1,45E-02	1,91E-03	3,18E-03	1,45E-02	2,42E-03	3,45E-05	-3,72E-01
AP	mol H+ eq	6,51E-01	9,70E-03	5,47E-03	2,13E-03	9,70E-03	2,78E-03	2,41E-05	-3,53E-01
EP - freshwater	kg P eq	4,60E-02	2,08E-04	5,36E-04	7,06E-06	2,08E-04	1,12E-04	2,67E-07	-3,80E-02
EP - marine	kg N eq	1,56E-01	3,34E-03	5,44E-04	9,88E-04	3,34E-03	4,98E-04	9,26E-06	-8,08E-02
EP - terrestrial	mol N eq	1,73E+00	3,52E-02	5,97E-03	1,07E-02	3,52E-02	5,35E-03	9,92E-05	-8,20E-01
WDP	m ³ depriv.	2,84E+01	1,72E-01	1,38E-01	6,49E-03	1,72E-01	6,67E-02	3,52E-03	5,71E+00
ADP - F	MJ	1,62E+03	4,22E+01	7,31E+00	3,01E+00	4,22E+01	1,18E+01	7,98E-02	-8,25E+02
ADP - MM	kg Sb eq	1,21E-03	9,55E-06	5,46E-05	8,03E-08	9,55E-06	5,17E-07	4,44E-09	-5,61E-04
PERE	MJ	1,82E+02	8,26E-01	1,63E+00	2,09E-02	8,26E-01	1,05E+00	8,79E-04	-9,21E+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
PERT	MJ	1,82E+02	8,26E-01	1,63E+00	2,09E-02	8,26E-01	1,05E+00	8,79E-04	-9,21E+01
PENRE	MJ	1,71E+03	2,79E+01	6,44E+00	-7,78E+01	1,05E+01	1,17E+01	5,21E-02	-9,58E+02
PENRM	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
PENRT	MJ	1,71E+03	2,79E+01	6,44E+00	-7,78E+01	1,05E+01	1,17E+01	5,21E-02	-9,58E+02
SM	kg	1,20E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	1,55E-03	0,00E+00	-1,44E+01
RSF	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
NRSF	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
FW	m ³	1,30E+00	6,98E-03	3,69E-03	2,61E-04	6,98E-03	2,60E-03	8,51E-05	-9,11E-01
HW	kg	7,58E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	5,54E-04	0,00E+00	-5,75E-01
NHW	kg	1,18E-01	0,00E+00	1,42E-07	0,00E+00	0,00E+00	2,83E-05	0,00E+00	-5,77E-02
RW	kg	1,45E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	9,18E-05	0,00E+00	-6,60E-03
REUSE	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
RECYCLE	kg	3,05E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	2,02E-03	0,00E+00	-3,97E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H3BP_MAR_W5_2012

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,52E+02	3,43E+00	4,41E-01	2,65E-01	3,43E+00	9,46E-01	3,69E-03	-9,00E+01
GWP - fossil	kg CO ₂ eq	1,58E+02	3,43E+00	4,32E-01	2,65E-01	3,43E+00	9,46E-01	3,69E-03	-8,98E+01
GWP - biogenic	kg CO ₂ eq	-5,83E+00	3,10E-03	7,63E-03	6,08E-05	3,10E-03	-3,29E-04	2,11E-06	-1,92E-01
GWP - luluc	kg CO ₂ eq	1,05E-01	1,66E-03	8,96E-04	2,98E-05	1,66E-03	1,17E-04	2,23E-06	-5,97E-02
GWP - GHG	kg CO ₂ eq	1,59E+02	3,44E+00	4,35E-01	2,66E-01	3,44E+00	9,49E-01	3,70E-03	-9,01E+01
ODP	kg CFC-11 eq	5,03E-06	7,46E-08	7,68E-09	4,22E-09	7,46E-08	2,03E-08	1,07E-10	-1,57E-06
POCP	kg NMVOC eq	6,42E-01	1,67E-02	1,91E-03	3,67E-03	1,67E-02	2,79E-03	3,98E-05	-4,28E-01
AP	mol H+ eq	7,35E-01	1,12E-02	5,47E-03	2,46E-03	1,12E-02	3,21E-03	2,78E-05	-4,06E-01
EP - freshwater	kg P eq	4,74E-02	2,40E-04	5,36E-04	8,14E-06	2,40E-04	1,30E-04	3,07E-07	-4,37E-02
EP - marine	kg N eq	1,61E-01	3,84E-03	5,44E-04	1,14E-03	3,84E-03	5,74E-04	1,07E-05	-9,30E-02
EP - terrestrial	mol N eq	2,06E+00	4,06E-02	5,97E-03	1,24E-02	4,06E-02	6,16E-03	1,14E-04	-9,44E-01
WDP	m ³ depriv.	4,28E+01	1,98E-01	1,38E-01	7,48E-03	1,98E-01	7,68E-02	4,06E-03	6,58E+00
ADP - F	MJ	1,58E+03	4,86E+01	7,31E+00	3,47E+00	4,86E+01	1,36E+01	9,19E-02	-9,50E+02
ADP - MM	kg Sb eq	1,26E-03	1,10E-05	5,46E-05	9,25E-08	1,10E-05	5,95E-07	5,12E-09	-6,46E-04
PERE	MJ	1,57E+02	7,69E-01	1,44E+00	2,01E-02	7,69E-01	9,06E-01	8,00E-04	-8,85E+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
PERT	MJ	1,57E+02	7,69E-01	1,44E+00	2,01E-02	7,69E-01	9,06E-01	8,00E-04	-8,85E+01
PENRE	MJ	1,79E+03	3,24E+01	6,43E+00	-1,55E+01	2,27E+01	1,37E+01	2,54E-01	-1,10E+03
PENRM	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
PENRT	MJ	1,79E+03	3,24E+01	6,43E+00	-1,55E+01	2,27E+01	1,37E+01	2,54E-01	-1,10E+03
SM	kg	1,74E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	1,79E-03	0,00E+00	-1,66E+01
RSF	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
NRSF	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
FW	m ³	9,74E-01	8,04E-03	3,69E-03	3,00E-04	8,04E-03	3,00E-03	9,81E-05	-1,05E+00
HW	kg	9,70E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	6,38E-04	0,00E+00	-6,62E-01
NHW	kg	1,08E-01	0,00E+00	1,42E-07	0,00E+00	0,00E+00	3,27E-05	0,00E+00	-6,65E-02
RW	kg	1,88E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	1,06E-04	0,00E+00	-7,60E-03
REUSE	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
RECYCLE	kg	3,94E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	2,33E-03	0,00E+00	-4,57E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H3BP_MAR_W4_2017

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,52E+02	3,43E+00	4,41E-01	2,65E-01	3,43E+00	9,46E-01	3,69E-03	-9,00E+01
GWP - fossil	kg CO ₂ eq	1,58E+02	3,43E+00	4,32E-01	2,65E-01	3,43E+00	9,46E-01	3,69E-03	-8,98E+01
GWP - biogenic	kg CO ₂ eq	-5,83E+00	3,10E-03	7,63E-03	6,08E-05	3,10E-03	-3,29E-04	2,11E-06	-1,92E-01
GWP - luluc	kg CO ₂ eq	1,05E-01	1,66E-03	8,96E-04	2,98E-05	1,66E-03	1,17E-04	2,23E-06	-5,97E-02
GWP - GHG	kg CO ₂ eq	1,59E+02	3,44E+00	4,35E-01	2,66E-01	3,44E+00	9,49E-01	3,70E-03	-9,01E+01
ODP	kg CFC-11 eq	5,03E-06	7,46E-08	7,68E-09	4,22E-09	7,46E-08	2,03E-08	1,07E-10	-1,57E-06
POCP	kg NMVOC eq	6,42E-01	1,67E-02	1,91E-03	3,67E-03	1,67E-02	2,79E-03	3,98E-05	-4,28E-01
AP	mol H+ eq	7,35E-01	1,12E-02	5,47E-03	2,46E-03	1,12E-02	3,21E-03	2,78E-05	-4,06E-01
EP - freshwater	kg P eq	4,74E-02	2,40E-04	5,36E-04	8,14E-06	2,40E-04	1,30E-04	3,07E-07	-4,37E-02
EP - marine	kg N eq	1,61E-01	3,84E-03	5,44E-04	1,14E-03	3,84E-03	5,74E-04	1,07E-05	-9,30E-02
EP - terrestrial	mol N eq	2,06E+00	4,06E-02	5,97E-03	1,24E-02	4,06E-02	6,16E-03	1,14E-04	-9,44E-01
WDP	m ³ depriv.	4,28E+01	1,98E-01	1,38E-01	7,48E-03	1,98E-01	7,68E-02	4,06E-03	6,58E+00
ADP - F	MJ	1,58E+03	4,86E+01	7,31E+00	3,47E+00	4,86E+01	1,36E+01	9,19E-02	-9,50E+02
ADP - MM	kg Sb eq	1,26E-03	1,10E-05	5,46E-05	9,25E-08	1,10E-05	5,95E-07	5,12E-09	-6,46E-04
PERE	MJ	1,56E+02	7,64E-01	1,29E+00	2,00E-02	7,64E-01	5,13E-01	7,95E-04	-8,84E+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
PERT	MJ	1,56E+02	7,64E-01	1,29E+00	2,00E-02	7,64E-01	5,13E-01	7,95E-04	-8,84E+01
PENRE	MJ	1,79E+03	3,24E+01	6,43E+00	-1,55E+01	2,27E+01	1,37E+01	2,54E-01	-1,10E+03
PENRM	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
PENRT	MJ	1,79E+03	3,24E+01	6,43E+00	-1,55E+01	2,27E+01	1,37E+01	2,54E-01	-1,10E+03
SM	kg	1,74E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	1,79E-03	0,00E+00	-1,66E+01
RSF	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
NRSF	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
FW	m ³	9,74E-01	8,04E-03	3,69E-03	3,00E-04	8,04E-03	3,00E-03	9,81E-05	-1,05E+00
HW	kg	9,70E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	6,38E-04	0,00E+00	-6,62E-01
NHW	kg	1,08E-01	0,00E+00	1,42E-07	0,00E+00	0,00E+00	3,27E-05	0,00E+00	-6,65E-02
RW	kg	1,88E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	1,06E-04	0,00E+00	-7,60E-03
REUSE	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
RECYCLE	kg	3,94E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	2,33E-03	0,00E+00	-4,57E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H4BP_MAR_W3_2017

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,52E+02	3,43E+00	4,41E-01	2,65E-01	3,43E+00	9,46E-01	3,69E-03	-9,00E+01
GWP - fossil	kg CO ₂ eq	1,58E+02	3,43E+00	4,32E-01	2,65E-01	3,43E+00	9,46E-01	3,69E-03	-8,98E+01
GWP - biogenic	kg CO ₂ eq	-5,83E+00	3,10E-03	7,63E-03	6,08E-05	3,10E-03	-3,29E-04	2,11E-06	-1,92E-01
GWP - luluc	kg CO ₂ eq	1,05E-01	1,66E-03	8,96E-04	2,98E-05	1,66E-03	1,17E-04	2,23E-06	-5,97E-02
GWP - GHG	kg CO ₂ eq	1,59E+02	3,44E+00	4,35E-01	2,66E-01	3,44E+00	9,49E-01	3,70E-03	-9,01E+01
ODP	kg CFC-11 eq	5,03E-06	7,46E-08	7,68E-09	4,22E-09	7,46E-08	2,03E-08	1,07E-10	-1,57E-06
POCP	kg NMVOC eq	6,42E-01	1,67E-02	1,91E-03	3,67E-03	1,67E-02	2,79E-03	3,98E-05	-4,28E-01
AP	mol H+ eq	7,35E-01	1,12E-02	5,47E-03	2,46E-03	1,12E-02	3,21E-03	2,78E-05	-4,06E-01
EP - freshwater	kg P eq	4,74E-02	2,40E-04	5,36E-04	8,14E-06	2,40E-04	1,30E-04	3,07E-07	-4,37E-02
EP - marine	kg N eq	1,61E-01	3,84E-03	5,44E-04	1,14E-03	3,84E-03	5,74E-04	1,07E-05	-9,30E-02
EP - terrestrial	mol N eq	2,06E+00	4,06E-02	5,97E-03	1,24E-02	4,06E-02	6,16E-03	1,14E-04	-9,44E-01
WDP	m ³ depriv.	4,28E+01	1,98E-01	1,38E-01	7,48E-03	1,98E-01	7,68E-02	4,06E-03	6,58E+00
ADP - F	MJ	1,58E+03	4,86E+01	7,31E+00	3,47E+00	4,86E+01	1,36E+01	9,19E-02	-9,50E+02
ADP - MM	kg Sb eq	1,26E-03	1,10E-05	5,46E-05	9,25E-08	1,10E-05	5,95E-07	5,12E-09	-6,46E-04
PERE	MJ	1,89E+02	9,52E-01	1,63E+00	2,40E-02	9,52E-01	1,22E+00	1,01E-03	-1,06E+02
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	1,89E+02	9,52E-01	1,63E+00	2,40E-02	9,52E-01	1,22E+00	1,01E-03	-1,06E+02
PENRE	MJ	1,79E+03	3,22E+01	6,44E+00	-8,96E+01	-9,71E+00	1,35E+01	6,01E-02	-1,10E+03
PENRM	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
PENRT	MJ	1,79E+03	3,22E+01	6,44E+00	-8,96E+01	-9,71E+00	1,35E+01	6,01E-02	-1,10E+03
SM	kg	1,74E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	1,79E-03	0,00E+00	-1,66E+01
RSF	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
NRSF	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
FW	m ³	9,74E-01	8,04E-03	3,69E-03	3,00E-04	8,04E-03	3,00E-03	9,81E-05	-1,05E+00
HW	kg	9,70E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	6,38E-04	0,00E+00	-6,62E-01
NHW	kg	1,08E-01	0,00E+00	1,42E-07	0,00E+00	0,00E+00	3,27E-05	0,00E+00	-6,65E-02
RW	kg	1,88E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	1,06E-04	0,00E+00	-7,60E-03
REUSE	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
RECYCLE	kg	3,94E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	2,33E-03	0,00E+00	-4,57E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
NEWJERSEY_2800

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	4,62E+02	5,94E+00	7,08E-01	7,37E-01	5,94E+00	1,64E+00	6,39E-03	-1,56E+02
GWP - fossil	kg CO ₂ eq	4,51E+02	5,93E+00	6,95E-01	7,37E-01	5,93E+00	1,64E+00	6,38E-03	-1,56E+02
GWP - biogenic	kg CO ₂ eq	9,02E+00	5,36E-03	1,23E-02	1,69E-04	5,36E-03	-5,69E-04	3,65E-06	-3,33E-01
GWP - luluc	kg CO ₂ eq	1,60E+00	2,88E-03	1,44E-03	8,29E-05	2,88E-03	2,02E-04	3,85E-06	-1,04E-01
GWP - GHG	kg CO ₂ eq	4,62E+02	5,95E+00	6,99E-01	7,38E-01	5,95E+00	1,64E+00	6,41E-03	-1,56E+02
ODP	kg CFC-11 eq	1,01E-05	1,29E-07	1,23E-08	1,17E-08	1,29E-07	3,50E-08	1,85E-10	-2,73E-06
POCP	kg NMVOC eq	1,94E+00	2,89E-02	3,07E-03	1,02E-02	2,89E-02	4,83E-03	6,88E-05	-7,43E-01
AP	mol H+ eq	1,94E+00	1,93E-02	8,79E-03	6,83E-03	1,93E-02	5,55E-03	4,81E-05	-7,05E-01
EP - freshwater	kg P eq	1,70E-01	4,15E-04	8,62E-04	2,26E-05	4,15E-04	2,24E-04	5,31E-07	-7,59E-02
EP - marine	kg N eq	4,74E-01	6,65E-03	8,74E-04	3,16E-03	6,65E-03	9,93E-04	1,85E-05	-1,61E-01
EP - terrestrial	mol N eq	4,73E+00	7,02E-02	9,60E-03	3,44E-02	7,02E-02	1,07E-02	1,98E-04	-1,64E+00
WDP	m ³ depriv.	3,18E+01	3,43E-01	2,22E-01	2,08E-02	3,43E-01	1,33E-01	7,02E-03	1,14E+01
ADP - F	MJ	5,31E+03	8,41E+01	1,18E+01	9,65E+00	8,41E+01	2,35E+01	1,59E-01	-1,65E+03
ADP - MM	kg Sb eq	5,46E-03	1,90E-05	8,78E-05	2,57E-07	1,90E-05	1,03E-06	8,86E-09	-1,12E-03
PERE	MJ	4,61E+02	1,33E+00	2,28E+00	5,58E-02	1,33E+00	1,50E+00	1,38E-03	-1,52E+02
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	4,61E+02	1,33E+00	2,28E+00	5,58E-02	1,33E+00	1,50E+00	1,38E-03	-1,52E+02
PENRE	MJ	5,43E+03	5,54E+01	1,03E+01	5,96E+00	2,67E+01	2,33E+01	1,04E-01	-1,92E+03
PENRM	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
PENRT	MJ	5,43E+03	5,54E+01	1,03E+01	5,96E+00	2,67E+01	2,33E+01	1,04E-01	-1,92E+03
SM	kg	7,28E+00	0,00E+00	1,25E-05	0,00E+00	0,00E+00	3,09E-03	0,00E+00	-2,89E+01
RSF	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
NRSF	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
FW	m ³	2,13E+00	2,38E-03	3,76E-03	1,35E-04	2,38E-03	4,08E-03	4,87E-06	-1,96E-01
HW	kg	9,83E-01	0,00E+00	4,47E-06	0,00E+00	0,00E+00	1,10E-03	0,00E+00	-1,15E+00
NHW	kg	2,08E-01	0,00E+00	2,29E-07	0,00E+00	0,00E+00	5,65E-05	0,00E+00	-1,15E-01
RW	kg	1,84E-02	0,00E+00	7,41E-07	0,00E+00	0,00E+00	1,83E-04	0,00E+00	-1,32E-02
REUSE	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
RECYCLE	kg	4,37E-01	0,00E+00	1,63E-05	0,00E+00	0,00E+00	4,03E-03	0,00E+00	-7,93E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H4BP_MAR_W4_2012

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	2,34E+02	3,83E+00	4,41E-01	2,96E-01	3,83E+00	1,06E+00	4,12E-03	-9,60E+01
GWP - fossil	kg CO ₂ eq	2,36E+02	3,83E+00	4,32E-01	2,96E-01	3,83E+00	1,06E+00	4,12E-03	-9,57E+01
GWP - biogenic	kg CO ₂ eq	-2,27E+00	3,46E-03	7,63E-03	6,79E-05	3,46E-03	-3,67E-04	2,36E-06	-2,04E-01
GWP - luluc	kg CO ₂ eq	8,88E-01	1,86E-03	8,96E-04	3,33E-05	1,86E-03	1,31E-04	2,49E-06	-6,36E-02
GWP - GHG	kg CO ₂ eq	2,40E+02	3,84E+00	4,35E-01	2,96E-01	3,84E+00	1,06E+00	4,13E-03	-9,61E+01
ODP	kg CFC-11 eq	6,21E-06	8,33E-08	7,68E-09	4,70E-09	8,33E-08	2,26E-08	1,19E-10	-1,68E-06
POCP	kg NMVOC eq	9,89E-01	1,86E-02	1,91E-03	4,09E-03	1,86E-02	3,11E-03	4,44E-05	-4,56E-01
AP	mol H+ eq	9,81E-01	1,25E-02	5,47E-03	2,74E-03	1,25E-02	3,58E-03	3,10E-05	-4,33E-01
EP - freshwater	kg P eq	7,67E-02	2,68E-04	5,36E-04	9,08E-06	2,68E-04	1,45E-04	3,43E-07	-4,66E-02
EP - marine	kg N eq	2,43E-01	4,29E-03	5,44E-04	1,27E-03	4,29E-03	6,41E-04	1,19E-05	-9,92E-02
EP - terrestrial	mol N eq	2,49E+00	4,53E-02	5,97E-03	1,38E-02	4,53E-02	6,87E-03	1,28E-04	-1,01E+00
WDP	m ³ depriv.	3,71E+01	2,21E-01	1,38E-01	8,35E-03	2,21E-01	8,57E-02	4,53E-03	7,01E+00
ADP - F	MJ	2,61E+03	5,42E+01	7,31E+00	3,87E+00	5,42E+01	1,51E+01	1,03E-01	-1,01E+03
ADP - MM	kg Sb eq	2,00E-03	1,23E-05	5,46E-05	1,03E-07	1,23E-05	6,64E-07	5,72E-09	-6,89E-04
PERE	MJ	2,84E+02	1,06E+00	1,63E+00	2,68E-02	1,06E+00	1,36E+00	1,13E-03	-1,13E+02
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	2,84E+02	1,06E+00	1,63E+00	2,68E-02	1,06E+00	1,36E+00	1,13E-03	-1,13E+02
PENRE	MJ	2,71E+03	3,59E+01	6,44E+00	-9,55E+01	1,30E+01	1,51E+01	6,70E-02	-1,18E+03
PENRM	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
PENRT	MJ	2,71E+03	3,59E+01	6,44E+00	-9,55E+01	1,30E+01	1,51E+01	6,70E-02	-1,18E+03
SM	kg	1,45E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	2,00E-03	0,00E+00	-1,78E+01
RSF	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
NRSF	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
FW	m ³	2,27E+00	8,97E-03	3,69E-03	3,35E-04	8,97E-03	3,34E-03	1,09E-04	-1,12E+00
HW	kg	9,08E-01	0,00E+00	2,78E-06	0,00E+00	0,00E+00	7,12E-04	0,00E+00	-7,06E-01
NHW	kg	1,40E-01	0,00E+00	1,42E-07	0,00E+00	0,00E+00	3,64E-05	0,00E+00	-7,09E-02
RW	kg	1,73E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	1,18E-04	0,00E+00	-8,11E-03
REUSE	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
RECYCLE	kg	3,76E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	2,60E-03	0,00E+00	-4,87E+01
EN-REC	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
EE-E	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
EE-T	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

BARRIERS FOR BRIDGE
GALVANIZED STEEL BARRIER
H4BP_MAR

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	2,30E+02	4,32E+00	4,41E-01	3,33E-01	4,32E+00	1,19E+00	4,64E-03	-1,06E+02
GWP - fossil	kg CO ₂ eq	2,35E+02	4,31E+00	4,32E-01	3,33E-01	4,31E+00	1,19E+00	4,64E-03	-1,06E+02
GWP - biogenic	kg CO ₂ eq	-5,55E+00	3,90E-03	7,63E-03	7,64E-05	3,90E-03	-4,14E-04	2,66E-06	-2,26E-01
GWP - luluc	kg CO ₂ eq	8,92E-01	2,09E-03	8,96E-04	3,75E-05	2,09E-03	1,47E-04	2,80E-06	-7,02E-02
GWP - GHG	kg CO ₂ eq	2,38E+02	4,32E+00	4,35E-01	3,34E-01	4,32E+00	1,19E+00	4,66E-03	-1,06E+02
ODP	kg CFC-11 eq	7,25E-06	9,38E-08	7,68E-09	5,30E-09	9,38E-08	2,55E-08	1,34E-10	-1,85E-06
POCP	kg NMVOC eq	9,88E-01	2,10E-02	1,91E-03	4,61E-03	2,10E-02	3,51E-03	5,00E-05	-5,03E-01
AP	mol H+ eq	1,04E+00	1,41E-02	5,47E-03	3,09E-03	1,41E-02	4,03E-03	3,49E-05	-4,78E-01
EP - freshwater	kg P eq	7,08E-02	3,02E-04	5,36E-04	1,02E-05	3,02E-04	1,63E-04	3,86E-07	-5,14E-02
EP - marine	kg N eq	2,45E-01	4,83E-03	5,44E-04	1,43E-03	4,83E-03	7,22E-04	1,34E-05	-1,09E-01
EP - terrestrial	mol N eq	2,86E+00	5,11E-02	5,97E-03	1,56E-02	5,11E-02	7,75E-03	1,44E-04	-1,11E+00
WDP	m ³ depriv.	3,09E+01	2,49E-01	1,38E-01	9,40E-03	2,49E-01	9,66E-02	5,10E-03	7,73E+00
ADP - F	MJ	2,52E+03	6,11E+01	7,31E+00	4,36E+00	6,11E+01	1,71E+01	1,16E-01	-1,12E+03
ADP - MM	kg Sb eq	2,05E-03	1,38E-05	5,46E-05	1,16E-07	1,38E-05	7,48E-07	6,44E-09	-7,60E-04
PERE	MJ	2,74E+02	1,20E+00	1,63E+00	3,02E-02	1,20E+00	1,53E+00	1,27E-03	-1,25E+02
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	2,74E+02	1,20E+00	1,63E+00	3,02E-02	1,20E+00	1,53E+00	1,27E-03	-1,25E+02
PENRE	MJ	2,63E+03	4,04E+01	6,44E+00	-1,05E+02	3,23E+01	1,70E+01	7,55E-02	-1,30E+03
PENRM	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
PENRT	MJ	2,63E+03	4,04E+01	6,44E+00	-1,05E+02	3,23E+01	1,70E+01	7,55E-02	-1,30E+03
SM	kg	1,98E+01	0,00E+00	7,79E-06	0,00E+00	0,00E+00	2,25E-03	0,00E+00	-1,96E+01
RSF	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
NRSF	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
FW	m ³	1,83E+00	1,01E-02	3,69E-03	3,78E-04	1,01E-02	3,77E-03	1,23E-04	-1,23E+00
HW	kg	1,25E+00	0,00E+00	2,78E-06	0,00E+00	0,00E+00	8,02E-04	0,00E+00	-7,78E-01
NHW	kg	1,94E-01	0,00E+00	1,42E-07	0,00E+00	0,00E+00	4,11E-05	0,00E+00	-7,82E-02
RW	kg	2,39E-02	0,00E+00	4,61E-07	0,00E+00	0,00E+00	1,33E-04	0,00E+00	-8,94E-03
REUSE	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
RECYCLE	kg	5,11E-01	0,00E+00	1,01E-05	0,00E+00	0,00E+00	2,93E-03	0,00E+00	-5,38E+01
EN-REC	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
EE-E	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
EE-T	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

DOUBLE SIDED GUARDRAILS

CORTEN STEEL BARRIER

H2SPT_W4

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	7,82E+01	1,88E+01	4,37E-01	1,45E-01	1,88E+01	5,18E-01	2,02E-03	-4,92E+01
GWP - fossil	kg CO ₂ eq	8,29E+01	1,88E+01	4,28E-01	1,45E-01	1,88E+01	5,18E-01	2,02E-03	-4,90E+01
GWP - biogenic	kg CO ₂ eq	-4,82E+00	1,70E-02	7,63E-03	3,33E-05	1,70E-02	-1,80E-04	1,16E-06	-1,05E-01
GWP - luluc	kg CO ₂ eq	5,51E-02	9,11E-03	8,96E-04	1,63E-05	9,11E-03	6,40E-05	1,22E-06	-3,26E-02
GWP - GHG	kg CO ₂ eq	8,33E+01	1,88E+01	4,31E-01	1,45E-01	1,88E+01	5,19E-01	2,03E-03	-4,92E+01
ODP	kg CFC-11 eq	2,79E-06	4,08E-07	7,59E-09	2,31E-09	4,08E-07	1,11E-08	5,85E-11	-8,58E-07
POCP	kg NMVOC eq	3,37E-01	9,14E-02	1,90E-03	2,01E-03	9,14E-02	1,53E-03	2,18E-05	-2,34E-01
AP	mol H ⁺ eq	3,40E-01	6,12E-02	5,46E-03	1,34E-03	6,12E-02	1,76E-03	1,52E-05	-2,22E-01
EP - freshwater	kg P eq	2,54E-02	1,31E-03	5,36E-04	4,45E-06	1,31E-03	7,09E-05	1,68E-07	-2,39E-02
EP - marine	kg N eq	8,23E-02	2,10E-02	5,41E-04	6,23E-04	2,10E-02	3,14E-04	5,84E-06	-5,08E-02
EP - terrestrial	mol N eq	8,72E-01	2,22E-01	5,94E-03	6,77E-03	2,22E-01	3,37E-03	6,26E-05	-5,16E-01
WDP	m ³ depriv.	2,36E+01	1,08E+00	1,38E-01	4,09E-03	1,08E+00	4,20E-02	2,22E-03	3,59E+00
ADP - F	MJ	8,12E+02	2,66E+02	7,25E+00	1,90E+00	2,66E+02	7,43E+00	5,03E-02	-5,19E+02
ADP - MM	kg Sb eq	5,30E-04	6,02E-05	5,46E-05	5,06E-08	6,02E-05	3,26E-07	2,80E-09	-3,53E-04
PERE	MJ	8,33E+01	4,18E+00	1,29E+00	1,10E-02	4,18E+00	2,81E-01	4,35E-04	-4,83E+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
PERT	MJ	8,33E+01	4,18E+00	1,29E+00	1,10E-02	4,18E+00	2,81E-01	4,35E-04	-4,83E+01
PENRE	MJ	9,47E+02	1,76E+02	6,37E+00	-8,47E+00	1,83E+02	8,39E+00	2,25E-01	-6,03E+02
PENRM	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
PENRT	MJ	9,47E+02	1,76E+02	6,37E+00	-8,47E+00	1,83E+02	8,39E+00	2,25E-01	-6,03E+02
SM	kg	9,77E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,79E-04	0,00E+00	-9,09E+00
RSF	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
NRSF	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
FW	m ³	4,50E-01	4,40E-02	3,68E-03	1,64E-04	4,40E-02	1,64E-03	5,37E-05	-5,73E-01
HW	kg	5,17E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,49E-04	0,00E+00	-3,62E-01
NHW	kg	5,60E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,79E-05	0,00E+00	-3,63E-02
RW	kg	1,01E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,79E-05	0,00E+00	-4,15E-03
REUSE	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
RECYCLE	kg	2,04E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,27E-03	0,00E+00	-2,50E+01
EN-REC	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
EE-E	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
EE-T	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

DOUBLE SIDED GUARDRAILS

GALVANIZED STEEL BARRIER

H2SPT_W4_2013-1

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	8,34E+01	1,95E+00	4,37E-01	1,51E-01	1,95E+00	5,38E-01	2,10E-03	-5,11E+01
GWP - fossil	kg CO ₂ eq	8,83E+01	1,95E+00	4,28E-01	1,51E-01	1,95E+00	5,38E-01	2,10E-03	-5,10E+01
GWP - biogenic	kg CO ₂ eq	-4,90E+00	1,76E-03	7,63E-03	3,46E-05	1,76E-03	-1,87E-04	1,20E-06	-1,09E-01
GWP - luluc	kg CO ₂ eq	5,86E-02	9,47E-04	8,96E-04	1,70E-05	9,47E-04	6,65E-05	1,27E-06	-3,39E-02
GWP - GHG	kg CO ₂ eq	8,87E+01	1,96E+00	4,31E-01	1,51E-01	1,96E+00	5,39E-01	2,11E-03	-5,11E+01
ODP	kg CFC-11 eq	2,94E-06	4,24E-08	7,59E-09	2,40E-09	4,24E-08	1,15E-08	6,08E-11	-8,92E-07
POCP	kg NMVOC eq	3,59E-01	9,50E-03	1,90E-03	2,08E-03	9,50E-03	1,59E-03	2,26E-05	-2,43E-01
AP	mol H ⁺ eq	3,62E-01	6,36E-03	5,46E-03	1,40E-03	6,36E-03	1,82E-03	1,58E-05	-2,31E-01
EP - freshwater	kg P eq	2,69E-02	1,36E-04	5,36E-04	4,63E-06	1,36E-04	7,37E-05	1,75E-07	-2,48E-02
EP - marine	kg N eq	8,78E-02	2,19E-03	5,41E-04	6,48E-04	2,19E-03	3,27E-04	6,07E-06	-5,28E-02
EP - terrestrial	mol N eq	9,29E-01	2,31E-02	5,94E-03	7,04E-03	2,31E-02	3,50E-03	6,50E-05	-5,36E-01
WDP	m ³ depriv.	2,48E+01	1,13E-01	1,38E-01	4,25E-03	1,13E-01	4,37E-02	2,31E-03	3,73E+00
ADP - F	MJ	8,73E+02	2,76E+01	7,25E+00	1,97E+00	2,76E+01	7,72E+00	5,23E-02	-5,39E+02
ADP - MM	kg Sb eq	5,64E-04	6,26E-06	5,46E-05	5,26E-08	6,26E-06	3,39E-07	2,91E-09	-3,67E-04
PERE	MJ	8,77E+01	4,34E-01	1,29E+00	1,14E-02	4,34E-01	2,92E-01	4,52E-04	-5,02E+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
PERT	MJ	8,77E+01	4,34E-01	1,29E+00	1,14E-02	4,34E-01	2,92E-01	4,52E-04	-5,02E+01
PENRE	MJ	9,89E+02	1,84E+01	6,37E+00	-8,80E+00	2,71E+01	7,78E+00	2,27E-01	-6,26E+02
PENRM	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
PENRT	MJ	9,89E+02	1,84E+01	6,37E+00	-8,80E+00	2,71E+01	7,78E+00	2,27E-01	-6,26E+02
SM	kg	1,04E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,02E-03	0,00E+00	-9,45E+00
RSF	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
NRSF	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
FW	m ³	4,92E-01	4,57E-03	3,68E-03	1,71E-04	4,57E-03	1,70E-03	5,58E-05	-5,96E-01
HW	kg	5,39E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,63E-04	0,00E+00	-3,76E-01
NHW	kg	5,84E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,86E-05	0,00E+00	-3,77E-02
RW	kg	1,06E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,02E-05	0,00E+00	-4,31E-03
REUSE	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
RECYCLE	kg	2,13E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,32E-03	0,00E+00	-2,59E+01
EN-REC	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
EE-E	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
EE-T	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

DOUBLE SIDED GUARDRAILS

GALVANIZED STEEL BARRIER

H2SPT_W5_MAR_2011

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,37E+02	3,06E+00	4,37E-01	2,36E-01	3,06E+00	8,43E-01	3,29E-03	-8,01E+01
GWP - fossil	kg CO ₂ eq	1,43E+02	3,06E+00	4,28E-01	2,36E-01	3,06E+00	8,43E-01	3,29E-03	-7,99E+01
GWP - biogenic	kg CO ₂ eq	-5,92E+00	2,76E-03	7,63E-03	5,42E-05	2,76E-03	-2,93E-04	1,88E-06	-1,71E-01
GWP - luluc	kg CO ₂ eq	9,69E-02	1,48E-03	8,96E-04	2,66E-05	1,48E-03	1,04E-04	1,98E-06	-5,31E-02
GWP - GHG	kg CO ₂ eq	1,44E+02	3,06E+00	4,31E-01	2,37E-01	3,06E+00	8,45E-01	3,30E-03	-8,02E+01
ODP	kg CFC-11 eq	4,53E-06	6,65E-08	7,59E-09	3,76E-09	6,65E-08	1,80E-08	9,52E-11	-1,40E-06
POCP	kg NMVOC eq	5,85E-01	1,49E-02	1,90E-03	3,27E-03	1,49E-02	2,49E-03	3,55E-05	-3,81E-01
AP	mol H ⁺ eq	5,95E-01	9,96E-03	5,46E-03	2,19E-03	9,96E-03	2,86E-03	2,48E-05	-3,61E-01
EP - freshwater	kg P eq	4,53E-02	2,14E-04	5,36E-04	7,25E-06	2,14E-04	1,16E-04	2,74E-07	-3,89E-02
EP - marine	kg N eq	1,44E-01	3,43E-03	5,41E-04	1,01E-03	3,43E-03	5,12E-04	9,51E-06	-8,28E-02
EP - terrestrial	mol N eq	1,51E+00	3,62E-02	5,94E-03	1,10E-02	3,62E-02	5,49E-03	1,02E-04	-8,40E-01
WDP	m ³ depriv.	3,53E+01	1,77E-01	1,38E-01	6,67E-03	1,77E-01	6,85E-02	3,62E-03	5,85E+00
ADP - F	MJ	1,44E+03	4,33E+01	7,25E+00	3,09E+00	4,33E+01	1,21E+01	8,19E-02	-8,45E+02
ADP - MM	kg Sb eq	1,05E-03	9,81E-06	5,46E-05	8,24E-08	9,81E-06	5,30E-07	4,56E-09	-5,75E-04
PERE	MJ	1,43E+02	6,80E-01	1,29E+00	1,78E-02	6,80E-01	4,57E-01	7,08E-04	-7,86E+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
PERT	MJ	1,43E+02	6,80E-01	1,29E+00	1,78E-02	6,80E-01	4,57E-01	7,08E-04	-7,86E+01
PENRE	MJ	1,62E+03	2,88E+01	6,37E+00	-1,38E+01	4,29E+01	1,22E+01	2,46E-01	-9,82E+02
PENRM	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
PENRT	MJ	1,62E+03	2,88E+01	6,37E+00	-1,38E+01	4,29E+01	1,22E+01	2,46E-01	-9,82E+02
SM	kg	1,49E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,59E-03	0,00E+00	-1,48E+01
RSF	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
NRSF	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
FW	m ³	1,01E+00	7,17E-03	3,68E-03	2,68E-04	7,17E-03	2,67E-03	8,74E-05	-9,34E-01
HW	kg	8,63E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	5,69E-04	0,00E+00	-5,89E-01
NHW	kg	1,16E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,91E-05	0,00E+00	-5,91E-02
RW	kg	1,67E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	9,43E-05	0,00E+00	-6,76E-03
REUSE	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
RECYCLE	kg	3,39E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,07E-03	0,00E+00	-4,07E+01
EN-REC	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
EE-E	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
EE-T	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

DOUBLE SIDED GUARDRAILS

GALVANIZED STEEL BARRIER

H2SPT_MAR

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,63E+02	3,44E+00	4,37E-01	2,66E-01	3,44E+00	9,47E-01	3,70E-03	-9,01E+01
GWP - fossil	kg CO ₂ eq	1,68E+02	3,43E+00	4,28E-01	2,65E-01	3,43E+00	9,47E-01	3,69E-03	-8,98E+01
GWP - biogenic	kg CO ₂ eq	-4,54E+00	3,11E-03	7,63E-03	6,09E-05	3,11E-03	-3,30E-04	2,12E-06	-1,92E-01
GWP - luluc	kg CO ₂ eq	1,14E-01	1,67E-03	8,96E-04	2,99E-05	1,67E-03	1,17E-04	2,23E-06	-5,97E-02
GWP - GHG	kg CO ₂ eq	1,70E+02	3,44E+00	4,31E-01	2,66E-01	3,44E+00	9,50E-01	3,71E-03	-9,01E+01
ODP	kg CFC-11 eq	5,29E-06	7,47E-08	7,59E-09	4,22E-09	7,47E-08	2,03E-08	1,07E-10	-1,57E-06
POCP	kg NMVOC eq	6,71E-01	1,67E-02	1,90E-03	3,67E-03	1,67E-02	2,79E-03	3,99E-05	-4,28E-01
AP	mol H ⁺ eq	7,00E-01	1,12E-02	5,46E-03	2,46E-03	1,12E-02	3,21E-03	2,78E-05	-4,06E-01
EP - freshwater	kg P eq	5,17E-02	2,40E-04	5,36E-04	8,15E-06	2,40E-04	1,30E-04	3,08E-07	-4,38E-02
EP - marine	kg N eq	1,70E-01	3,85E-03	5,41E-04	1,14E-03	3,85E-03	5,75E-04	1,07E-05	-9,31E-02
EP - terrestrial	mol N eq	1,78E+00	4,07E-02	5,94E-03	1,24E-02	4,07E-02	6,17E-03	1,15E-04	-9,45E-01
WDP	m ³ depriv.	3,99E+01	1,98E-01	1,38E-01	7,49E-03	1,98E-01	7,69E-02	4,07E-03	6,58E+00
ADP - F	MJ	1,69E+03	4,87E+01	7,25E+00	3,48E+00	4,87E+01	1,36E+01	9,21E-02	-9,50E+02
ADP - MM	kg Sb eq	1,37E-03	1,10E-05	5,46E-05	9,26E-08	1,10E-05	5,96E-07	5,13E-09	-6,46E-04
PERE	MJ	1,72E+02	7,65E-01	1,29E+00	2,00E-02	7,65E-01	5,13E-01	7,96E-04	-8,84E+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
PERT	MJ	1,72E+02	7,65E-01	1,29E+00	2,00E-02	7,65E-01	5,13E-01	7,96E-04	-8,84E+01
PENRE	MJ	1,90E+03	3,24E+01	6,37E+00	-1,55E+01	3,44E+01	1,37E+01	2,53E-01	-1,10E+03
PENRM	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
PENRT	MJ	1,90E+03	3,24E+01	6,37E+00	-1,55E+01	3,44E+01	1,37E+01	2,53E-01	-1,10E+03
SM	kg	1,80E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,79E-03	0,00E+00	-1,66E+01
RSF	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
NRSF	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
FW	m ³	1,31E+00	8,05E-03	3,68E-03	3,01E-04	8,05E-03	3,00E-03	9,82E-05	-1,05E+00
HW	kg	1,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,39E-04	0,00E+00	-6,62E-01
NHW	kg	1,74E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,27E-05	0,00E+00	-6,65E-02
RW	kg	2,13E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E-04	0,00E+00	-7,60E-03
REUSE	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
RECYCLE	kg	4,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,33E-03	0,00E+00	-4,57E+01
EN-REC	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
EE-E	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
EE-T	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

DOUBLE SIDED GUARDRAILS

GALVANIZED STEEL BARRIER

H4SPT_W5_2013

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,63E+02	3,44E+00	4,37E-01	2,66E-01	3,44E+00	9,47E-01	3,70E-03	-9,01E+01
GWP - fossil	kg CO ₂ eq	1,68E+02	3,43E+00	4,28E-01	2,65E-01	3,43E+00	9,47E-01	3,69E-03	-8,98E+01
GWP - biogenic	kg CO ₂ eq	-4,54E+00	3,11E-03	7,63E-03	6,09E-05	3,11E-03	-3,30E-04	2,12E-06	-1,92E-01
GWP - luluc	kg CO ₂ eq	1,14E-01	1,67E-03	8,96E-04	2,99E-05	1,67E-03	1,17E-04	2,23E-06	-5,97E-02
GWP - GHG	kg CO ₂ eq	1,70E+02	3,44E+00	4,31E-01	2,66E-01	3,44E+00	9,50E-01	3,71E-03	-9,01E+01
ODP	kg CFC-11 eq	5,29E-06	7,47E-08	7,59E-09	4,22E-09	7,47E-08	2,03E-08	1,07E-10	-1,57E-06
POCP	kg NMVOC eq	6,71E-01	1,67E-02	1,90E-03	3,67E-03	1,67E-02	2,79E-03	3,99E-05	-4,28E-01
AP	mol H ⁺ eq	7,00E-01	1,12E-02	5,46E-03	2,46E-03	1,12E-02	3,21E-03	2,78E-05	-4,06E-01
EP - freshwater	kg P eq	5,17E-02	2,40E-04	5,36E-04	8,15E-06	2,40E-04	1,30E-04	3,08E-07	-4,38E-02
EP - marine	kg N eq	1,70E-01	3,85E-03	5,41E-04	1,14E-03	3,85E-03	5,75E-04	1,07E-05	-9,31E-02
EP - terrestrial	mol N eq	1,78E+00	4,07E-02	5,94E-03	1,24E-02	4,07E-02	6,17E-03	1,15E-04	-9,45E-01
WDP	m ³ depriv.	3,99E+01	1,98E-01	1,38E-01	7,49E-03	1,98E-01	7,69E-02	4,07E-03	6,58E+00
ADP - F	MJ	1,69E+03	4,87E+01	7,25E+00	3,48E+00	4,87E+01	1,36E+01	9,21E-02	-9,50E+02
ADP - MM	kg Sb eq	1,37E-03	1,10E-05	5,46E-05	9,26E-08	1,10E-05	5,96E-07	5,13E-09	-6,46E-04
PERE	MJ	1,72E+02	7,65E-01	1,29E+00	2,00E-02	7,65E-01	5,13E-01	7,96E-04	-8,84E+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
PERT	MJ	1,72E+02	7,65E-01	1,29E+00	2,00E-02	7,65E-01	5,13E-01	7,96E-04	-8,84E+01
PENRE	MJ	1,90E+03	3,24E+01	6,37E+00	-1,55E+01	3,44E+01	1,37E+01	2,53E-01	-1,10E+03
PENRM	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
PENRT	MJ	1,90E+03	3,24E+01	6,37E+00	-1,55E+01	3,44E+01	1,37E+01	2,53E-01	-1,10E+03
SM	kg	1,80E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,79E-03	0,00E+00	-1,66E+01
RSF	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
NRSF	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
FW	m ³	1,31E+00	8,05E-03	3,68E-03	3,01E-04	8,05E-03	3,00E-03	9,82E-05	-1,05E+00
HW	kg	1,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,39E-04	0,00E+00	-6,62E-01
NHW	kg	1,74E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,27E-05	0,00E+00	-6,65E-02
RW	kg	2,13E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E-04	0,00E+00	-7,60E-03
REUSE	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
RECYCLE	kg	4,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,33E-03	0,00E+00	-4,57E+01
EN-REC	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
EE-E	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
EE-T	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

DOUBLE SIDED GUARDRAILS

GALVANIZED STEEL BARRIER

H4SPT_W4_2015_P

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,63E+02	3,44E+00	4,37E-01	2,66E-01	3,44E+00	9,47E-01	3,70E-03	-9,01E+01
GWP - fossil	kg CO ₂ eq	1,68E+02	3,43E+00	4,28E-01	2,65E-01	3,43E+00	9,47E-01	4,81E-03	-8,98E+01
GWP - biogenic	kg CO ₂ eq	-4,54E+00	3,11E-03	7,63E-03	6,09E-05	3,11E-03	-3,30E-04	4,76E-06	-1,92E-01
GWP - luluc	kg CO ₂ eq	1,14E-01	1,67E-03	8,96E-04	2,99E-05	1,67E-03	1,17E-04	4,54E-06	-5,97E-02
GWP - GHG	kg CO ₂ eq	1,70E+02	3,44E+00	4,31E-01	2,66E-01	3,44E+00	9,50E-01	4,72E-03	-9,01E+01
ODP	kg CFC-11 eq	5,29E-06	7,47E-08	7,59E-09	4,22E-09	7,47E-08	2,03E-08	1,94E-09	-1,57E-06
POCP	kg NMVOC eq	6,71E-01	1,67E-02	1,90E-03	3,67E-03	1,67E-02	2,79E-03	5,00E-05	-4,28E-01
AP	mol H ⁺ eq	7,00E-01	1,12E-02	5,46E-03	2,46E-03	1,12E-02	3,21E-03	4,52E-05	-4,06E-01
EP - freshwater	kg P eq	5,17E-02	2,40E-04	5,36E-04	8,15E-06	2,40E-04	1,30E-04	4,40E-07	-4,38E-02
EP - marine	kg N eq	1,70E-01	3,85E-03	5,41E-04	1,14E-03	3,85E-03	5,75E-04	1,57E-05	-9,31E-02
EP - terrestrial	mol N eq	1,78E+00	4,07E-02	5,94E-03	1,24E-02	4,07E-02	6,17E-03	1,72E-04	-9,45E-01
WDP	m ³ depriv.	3,99E+01	1,98E-01	1,38E-01	7,49E-03	1,98E-01	7,69E-02	6,04E-03	6,58E+00
ADP - F	MJ	1,69E+03	4,87E+01	7,25E+00	3,48E+00	4,87E+01	1,36E+01	1,34E-01	-9,50E+02
ADP - MM	kg Sb eq	1,37E-03	1,10E-05	5,46E-05	9,26E-08	1,10E-05	5,96E-07	1,10E-08	-6,46E-04
PERE	MJ	1,72E+02	7,65E-01	1,29E+00	2,00E-02	7,65E-01	5,13E-01	1,53E-03	-8,84E+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
PERT	MJ	1,72E+02	7,65E-01	1,29E+00	2,00E-02	7,65E-01	5,13E-01	1,53E-03	-8,84E+01
PENRE	MJ	1,90E+03	3,24E+01	6,37E+00	-1,55E+01	3,44E+01	1,37E+01	1,33E-01	-1,10E+03
PENRM	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
PENRT	MJ	1,90E+03	3,24E+01	6,37E+00	-1,55E+01	3,44E+01	1,37E+01	1,33E-01	-1,10E+03
SM	kg	1,80E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,79E-03	0,00E+00	-1,66E+01
RSF	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
NRSF	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
FW	m ³	1,31E+00	8,05E-03	3,68E-03	3,01E-04	8,05E-03	3,00E-03	1,49E-04	-1,05E+00
HW	kg	1,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,39E-04	0,00E+00	-6,62E-01
NHW	kg	1,74E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,27E-05	0,00E+00	-6,65E-02
RW	kg	2,13E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,06E-04	0,00E+00	-7,60E-03
REUSE	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
RECYCLE	kg	4,40E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,33E-03	0,00E+00	-4,57E+01
EN-REC	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
EE-E	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
EE-T	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

SPECIAL COMPONENTS AND ACCESSORIES

TERMINAL FOR SAFETY BARRIERS P4

ABB.	UNIT	A1 - A3	A4	A5	C1	C2	C3	C4	D
GWP - t	kg CO ₂ eq	1,61E+02	3,29E+00	4,83E-01	2,55E-01	3,29E+00	9,06E-01	3,54E-03	-8,66E+01
GWP - fossil	kg CO ₂ eq	1,65E+02	3,29E+00	4,74E-01	2,54E-01	3,29E+00	9,06E-01	3,53E-03	-8,64E+01
GWP - biogenic	kg CO ₂ eq	-3,64E+00	2,97E-03	8,44E-03	5,84E-05	2,97E-03	-3,15E-04	2,02E-06	-1,85E-01
GWP - luluc	kg CO ₂ eq	1,13E-01	1,59E-03	9,91E-04	2,86E-05	1,59E-03	1,12E-04	2,13E-06	-5,74E-02
GWP - GHG	kg CO ₂ eq	1,67E+02	3,29E+00	4,77E-01	2,55E-01	3,29E+00	9,09E-01	3,55E-03	-8,67E+01
ODP	kg CFC-11 eq	5,48E-06	7,15E-08	8,40E-09	4,05E-09	7,15E-08	1,94E-08	1,02E-10	-1,51E-06
POCP	kg NMVOC eq	6,63E-01	1,60E-02	2,10E-03	3,52E-03	1,60E-02	2,67E-03	3,81E-05	-4,12E-01
AP	mol H ⁺ eq	7,41E-01	1,07E-02	6,04E-03	2,36E-03	1,07E-02	3,07E-03	2,66E-05	-3,91E-01
EP - freshwater	kg P eq	5,12E-02	2,30E-04	5,93E-04	7,81E-06	2,30E-04	1,24E-04	2,94E-07	-4,21E-02
EP - marine	kg N eq	1,69E-01	3,68E-03	5,99E-04	1,09E-03	3,68E-03	5,50E-04	1,02E-05	-8,95E-02
EP - terrestrial	mol N eq	1,98E+00	3,89E-02	6,58E-03	1,19E-02	3,89E-02	5,90E-03	1,10E-04	-9,09E-01
WDP	m ³ depriv.	2,59E+01	1,90E-01	1,53E-01	7,18E-03	1,90E-01	7,36E-02	3,89E-03	6,33E+00
ADP - F	MJ	1,68E+03	4,66E+01	8,03E+00	3,33E+00	4,66E+01	1,30E+01	8,81E-02	-9,14E+02
ADP - MM	kg Sb eq	1,59E-03	1,05E-05	6,05E-05	8,88E-08	1,05E-05	5,70E-07	4,91E-09	-6,22E-04
PERE	MJ	1,67E+02	7,31E-01	1,42E+00	1,92E-02	7,31E-01	4,91E-01	7,61E-04	-8,50E+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
PERT	MJ	1,67E+02	7,31E-01	1,42E+00	1,92E-02	7,31E-01	4,91E-01	7,61E-04	-8,50E+01
PENRE	MJ	1,86E+03	3,10E+01	7,05E+00	-1,49E+01	4,90E+01	1,31E+01	2,70E-01	-1,06E+03
PENRM	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
PENRT	MJ	1,86E+03	3,10E+01	7,05E+00	-1,49E+01	4,90E+01	1,31E+01	2,70E-01	-1,06E+03
SM	kg	1,68E+01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,71E-03	0,00E+00	-1,60E+01
RSF	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
NRSF	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
FW	m ³	1,36E+00	7,70E-03	4,07E-03	2,88E-04	7,70E-03	2,87E-03	9,40E-05	-1,01E+00
HW	kg	1,11E+00	0,00E+00	0,00E+00	0,00E+00	0,00E+00	6,11E-04	0,00E+00	-6,37E-01
NHW	kg	1,83E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	3,13E-05	0,00E+00	-6,40E-02
RW	kg	2,11E-02	0,00E+00	0,00E+00	0,00E+00	0,00E+00	1,01E-04	0,00E+00	-7,32E-03
REUSE	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
RECYCLE	kg	4,50E-01	0,00E+00	0,00E+00	0,00E+00	0,00E+00	2,23E-03	0,00E+00	-4,40E+01
EN-REC	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
EE-E	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
EE-T	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

12. NOTES ON SUSTAINABILITY

Steel falls into the category of durable goods and is considered to be a **permanent material**. It can be **re-generated and reused over and over** again without ever losing any of its original properties, resistance, and durability, allowing it to have a **very long life cycle**, ample opportunities for **industrial synergies**, the possibility to be easily separated from other materials, as a result of its magnetic characteristics and specific weight. Marcegaglia Buildtech has always paid particular attention to **waste reduction** thanks to specific policies in the management of processes: metal waste is a durable material that can be recast over and over again without losing its properties.

It should be noted that at the end of its useful life, once the road barrier has been disassembled it is destined for recycling. The 87.2% of the steel recovered is intended for recycling, the value is consistent with the report released by ISPRA in 2022: "Rapporto rifiuti speciali" di ISPRA – n° 367/2022.

Only for the waves and poles of the road barriers, the raw materials mainly are steel strips from other companies in the Marcegaglia group, whose steel has a recycled content of 24.4%: this percentage is calculated as a weighted average of the same value associated with the incoming raw material and deriving both from Type III environmental declarations as well as from self-declarations compliant with the UNI EN ISO 14021 standard. The steel comes both from blast furnace (with an average recycled content of 17.0%) and from an electric arc furnace (with an average recycled content of 82.8%).

13. REFERENCES

- General Programme Instructions of the International EPD® System. Version 3.01.
- PCR 2019:14 - Version 1.11 "CONSTRUCTION PRODUCTS" – Date 2021-02-05;
- c-PCR-010 (TO PCR 2019:14) "GUARDRAILS AND BRIDGE PARAPETS" – Date 2021-04-23;
- Product Category Rules for Type III environmental product declaration of construction products to EN 15804:2012;
- Ecoinvent database v.3.9.1 – January 2023;
- UNI EN ISO 14025: 2010 "Environmental labels and declarations - Type III environmental declarations - Principles and procedures";
- UNI EN ISO 14040: 2021 "Environmental management - Life cycle assessment - Principles and framework";
- UNI EN ISO 14044:2021 " Environmental management - Life cycle assessment - Requirements and guidelines";
- UNI EN ISO 15804:2019 "Sustainability of buildings - Environmental product declarations - Development framework rules by product category";
- European Residual Mixes 2022 Association of Issuing Bodies "European Residual Mixes - Results of the calculation of Residual Mixes for the calendar year 2022" – version 1.0, 2023-06-01;
- CSIRO "Metal recycling: The need for a life cycle approach" – May 2013;
- Environmental engineering "WASTE FROM CONSTRUCTION AND LCA DEMOLITION FROM THE DEMOLITION OF 51 RESIDENTIAL BUILDINGS" - Michele Paleari, Politecnico di Milano – 26-11-2015;
- ISPRA " Special waste report" – n° 367/2022.

14. GENERAL INFORMATION

PROGRAMME INFORMATION

PROGRAMME:

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CEN standard EN 15804 serves as the Core Product Category Rules (PCR).

Product Category Rules (PCR):

Construction products, 2019:14, version 1.11,

UN CPC 54, valid until 20-12-2024

Complementary Product Category Rules (c-PCR)

to PCR 2019:14:

Guardrails and bridge parapets, 2019:14, version

2021-04-23, UN CPC 532, valid until 20-12-2024

PCR review was conducted by:

The Technical Committee of the International EPD® System. Review chair: Claudia A. Peña - Contact via the Secretariat www.environdec.com/contact

c-PCR review was conducted by:

The Technical Committee of the International EPD® System. Review chair: Gorka Bonito - Contact via the Secretariat www.environdec.com/contact

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

EPD verification by individual verifier

Third-party verifier: Guido Croce

Approved by: The International EPD® System Technical Committee, supported by the Secretariat Procedure for follow-up of data during EPD validity involves third party verifier:

SI NO

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

EPDs within the same product category but from different programmes may not be comparable. EPDs of construction products may not be comparable if they do not comply with UNI EN 15804. For further information about comparability, see EN 15804 and ISO 14025.

DIFFERENCES VERSUS PREVIOUS VERSIONS

Compared to the previous version referring to the data of the year 2021, this EPD Declaration considers the data of the year 2022; this review of the data is due from the increase of the percentage electricity product by fossil fuels in the Italian residual mix. For this reason in the 2022 there is an increase higher than 10% for some indicators in the modules C1-C4 and A4. In addition, more up-to-date databases and evaluation's methods were used than those used in the previous version of the environmental impact analysis.

To obtain more information about this product declaration and/or its configurations, the following references are available:

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