Environmental Product Declaration

according to ISO 14025 and EN 15804

This declaration is for:
EcoSheetPiles™ - Traditional Electricity

Provided by:
ArcelorMittal Projects Europe

program operator
Stichting MRPI®
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PRODUCT

EcoSheetPiles™ - Traditional Electricity

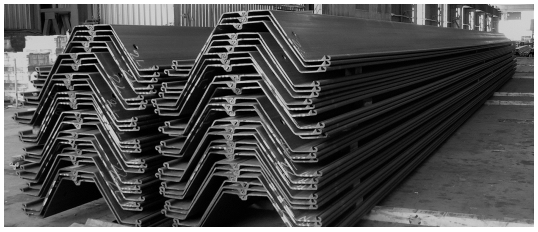
DECLARED UNIT/FUNCTIONAL UNIT

1 metric ton of steel sheet pile

DESCRIPTION OF PRODUCT

Steel sheet piling are rolled steel profiles with longitudinal clutches at each side. Sheet piles can be connected to each other allowing the construction of a continuous wall.

VISUAL PRODUCT



MRPI® REGISTRATION

1.1.00436.2023

DATE OF ISSUE

13-04-2023

EXPIRY DATE

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MORE INFORMATION

https://projects.arcelormittal.com/foundationsolutions

SCOPE OF DECLARATION

This MRPI®-EPD certificate is verified by **dr. U.Hofstra, SGS INTRON.**
The LCA study has been done by **Kamiel Jansen, Aveco de Bondt.**
The certificate is based on an LCA-dossier according to ISO14025 and EN15804+A2/Bepalingsmethode. It is verified according to the 'MRPI®-EPD verification protocol November 2020.v4.0'. EPDs of construction products may not be comparable if they do not comply with EN15804+A2/Bepalingsmethode. Declaration of SVHC that are listed on the 'Candidate List of Substances of Very High Concern for authorisation' when content exceeds the limits for registration with ECHA.

PROGRAM OPERATOR

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DEMONSTRATION OF VERIFICATION
CEN standard EN15804 serves as the core PCR[a]
Independent verification of the declaration and data, according to EN ISO 14025:2010: internal: external: X
Third party verifier: dr. U.Hofstra, SGS INTRON
[a] PCR = Product Category Rules

DETAILED PRODUCT DESCRIPTION

Product description / Product definition

Steel sheet piling are rolled steel profiles with longitudinal clutches at each side. Sheet piles can be connected to each other through these clutches creating a mechanical connection (i.e. interlock) between the profiles allowing the construction of a continuous wall. This EPD applies to 1 metric ton of EcoSheetPiles™. EcoSheetPiles™ are produced at the ArcelorMittal sites Differdange/Esch-Belval in Luxembourg (296 Bd Charles de Gaulle, 4083 Esch-sur-Alzette, Luxembourg) from ca. 100% scrap in an electric arc furnace route and are 100% reusable and recyclable. The sheet piles are produced with a traditional electricity mix. The types of EcoSheetPiles™ available are: Z-shaped, U-shaped, straight-web, and H-shaped. The available steel grades for EcoSheetPile™ profiles are ranging from S240 GP till S460 AP (according to EN10248) and equivalent grades.

Application

Sheet pile walls resist to high pressure and can support massive height of soil with a small quantity of steel compared to the applied loads. Steel piling products are used worldwide in many kinds of permanent or temporary structures: quay walls and breakwaters in harbors and locks, bank reinforcement on rivers and canals, pumping stations, bridge abutments, retaining walls for underpasses or underground car parks, impervious containment walls, temporary cofferdams in land and in water, containment barriers, and load bearing foundations, among others.

Technical Data

This EPD is valid for EcoSheetPiles™ steel piling products of varied grades and geometries, as well as different forms of delivery. Specific information on dimension tolerances, constructional data and mechanical and chemical properties can be found in the relevant standards /EN 10248/.

Reference service life

A reference service life for steel piling products is not declared. The documentation of the RSL is not required for the EPD of the ArcelorMittal since not the entire life cycle is declared (only modules A1-A3, C2, C3, C4, with D). Additionally, steel piling products are construction products used in many different applications and service lifetimes. The service life of steel sheet piles can go up to 100 years or more, depending on the design of the project.

Components

Iron is the main component of steel piling products. Alloying elements are added in the form of ferroalloys or metals, the most common elements are manganese, chromium and vanadium. Other elements like nitrogen or copper may be present in the steel. The exact composition of these elements depends on the steel grade.

COMPONENT > 1% of total mass	[%]
Steel made from secondary sources (scrap, EAF process)	>96 %
Manganese is introduced in the form of ferroalloy.	up to 1.7%

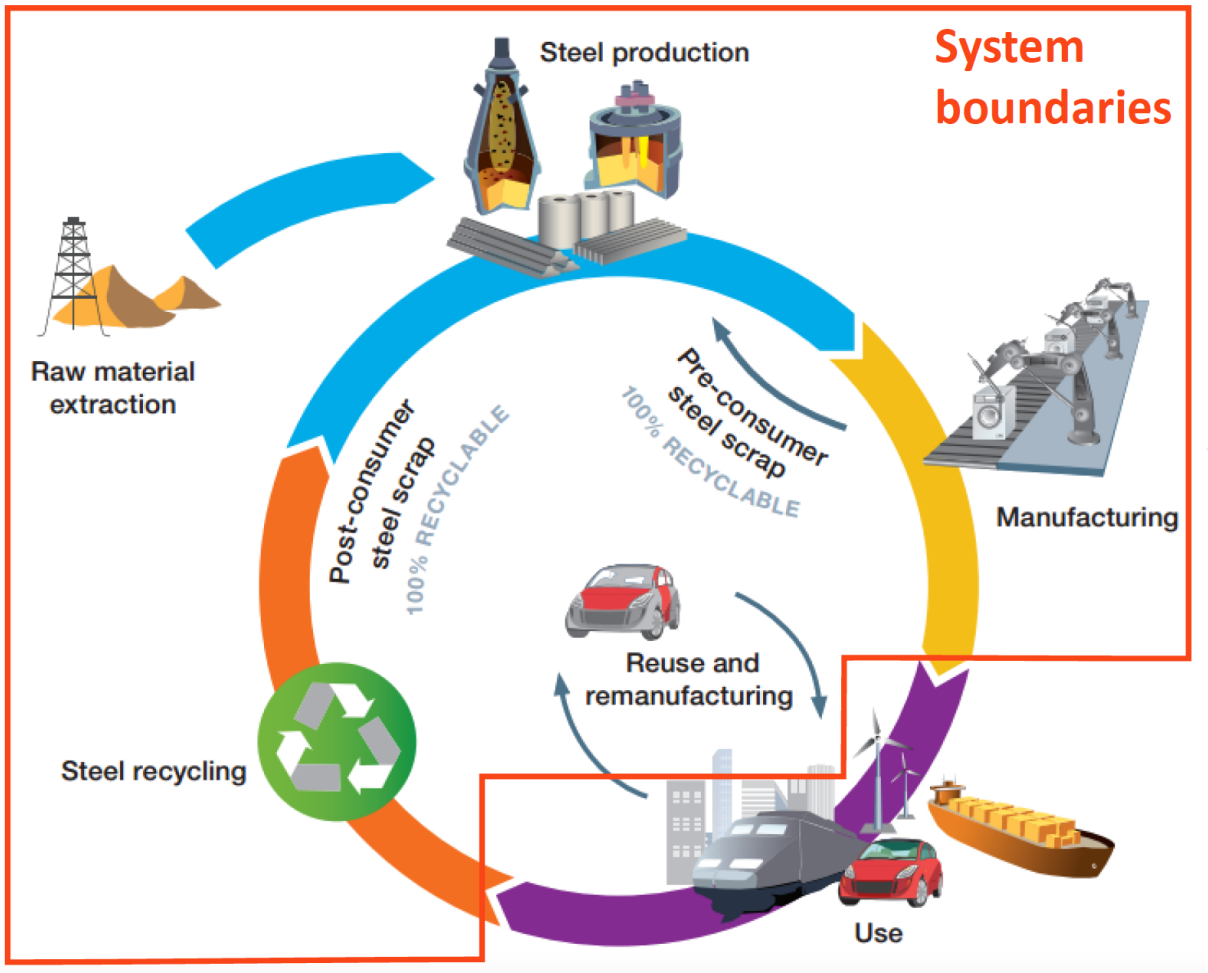
SCOPE AND TYPE

The sheetpiles are produced at the location ArcelorMittal Differdange and Esch-Belval and they are applied at the Dutch market. The environmental impact between the two rolling mill locations is averaged on a weighted average basis. The difference between the two locations is small <20%.
The background database is EcoInvent version 3.6. It is a specific EPD for a specific product. The declaration applies to 1 metric ton of EcoSheetPiles™. It covers hot rolled steel sheet piling (Z-shaped, U-shaped, straight-web, and H-shaped) produced by ArcelorMittal.

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport gate to site	Assembly	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	ND	X	ND	ND	ND	ND	ND	ND	ND	ND	X	X	X	X

X = Modules Assessed

ND = Not Declared



LCA process diagram according to EN 15804 (7.2.1)

REPRESENTATIVENESS

The input data are representative for EcoSheetPiles™, a product of ArcelorMittal. The data are representative for The Netherlands

ENVIRONMENTAL IMPACT per functional unit or declared unit (indicators A1)

	UNIT	A1-A3	A5	C2	C3	C4	D
ADPE	kg Sb eq.	7.66E-3	2.30E-4	1.08E-4	2.91E-4	9.15E-7	-1.75E-3
ADPF	MJ	1.07E+4	3.21E+2	6.42E+1	2.31E+2	2.29E+1	-2.49E+3
GWP	kg CO2 eq.	4.27E+2	1.28E+1	4.22E+0	1.67E+1	8.01E-1	1.64E+2
ODP	kg CFC11 eq.	8.73E-5	2.62E-6	7.49E-7	1.98E-6	2.65E-7	-1.57E-5
POCP	kg ethene eq.	1.78E-1	5.33E-3	2.55E-3	1.31E-2	8.49E-4	9.08E-2
AP	kg SO2 eq.	1.09E+0	3.27E-2	1.86E-2	1.44E-1	5.92E-3	2.84E-1
EP	kg (PO4)3- eq.	1.64E-1	4.93E-3	3.65E-3	3.10E-2	1.11E-3	2.69E-2

Toxicity indicators for Dutch market

HTP	kg DCB eq.	2.04E+2	6.11E+0	1.78E+0	1.60E+1	3.27E-1	-8.54E+0
FAETP	kg DCB eq.	3.03E+0	9.10E-2	5.19E-2	2.24E-1	8.12E-3	-3.63E-1
MAETP	kg DCB eq.	7.32E+3	2.20E+2	1.87E+2	1.35E+3	2.79E+1	-6.92E+2
TETP	kg DCB eq.	7.33E-1	2.20E-2	6.29E-3	5.22E-2	9.68E-4	-3.28E+0
ECI	Euro	4.72E+1	1.42E+0	5.09E-1	3.32E+0	1.10E-1	9.23E+0
ADPF	kg Sb. eq.	2.98E+0	8.93E-2	3.11E-2	1.09E-1	1.09E-2	7.51E-1

ADPE = Abiotic Depletion Potential for non-fossil resources
ADPF = Abiotic Depletion Potential for fossil resources
GWP = Global Warming Potential
ODP = Depletion potential of the stratospheric ozone layer
POCP = Formation potential of tropospheric ozone photochemical oxidants
AP = Acidification Potential of land and water
EP = Eutrophication Potential
HTP = Human Toxicity Potential
FAETP = Fresh water aquatic ecotoxicity potential
MAETP = Marine aquatic ecotoxicity potential
TETP = Terrestrial ecotoxicity potential
ECI = Environmental Cost Indicator
ADPF = Abiotic Depletion Potential for fossil resources expressed in [kg Sb-eq.]

ENVIRONMENTAL IMPACT per functional unit or declared unit (core indicators A2)

	UNIT	A1-A3	A5	C2	C3	C4	D
GWP-total	kg CO2 eq.	4.40E+2	1.32E+1	4.26E+0	1.62E+1	8.08E-1	-1.21E+2
GWP-fossil	kg CO2 eq.	4.35E+2	1.30E+1	4.26E+0	1.70E+1	8.18E-1	-1.20E+2
GWP-biogenic	kg CO2 eq.	4.48E+0	1.34E-1	1.97E-3	-8.66E-1	-1.06E-2	-6.86E-1
GWP-luluc	kg CO2 eq.	2.77E-1	8.32E-3	1.56E-3	1.94E-2	3.60E-4	-5.13E-2
ODP	kg CFC11 eq.	7.67E-5	2.30E-6	9.40E-7	2.30E-6	3.35E-7	-1.69E-5
AP	mol H+ eq.	1.37E+0	4.11E-2	2.47E-2	1.81E-1	7.77E-3	-3.68E-1
EP-freshwater	kg PO4 eq.	1.23E-2	3.70E-4	4.30E-5	4.96E-3	1.46E-5	-3.24E-3
EP-marine	kg N eq.	3.08E-1	9.23E-3	8.71E-3	4.07E-2	2.57E-3	-8.05E-2
EP-terrestrial	mol N eq.	3.60E+0	1.08E-1	9.60E-2	4.76E-1	2.83E-2	-9.09E-1
POCP	kg NMVOC eq.	1.00E+0	3.01E-2	2.74E-2	1.28E-1	8.24E-3	-2.69E-1
ADP-minerals & metals	kg Sb eq.	7.66E-3	2.30E-4	1.08E-4	2.91E-4	9.15E-7	-1.67E-3
ADP-fossil	MJ, net calorific value	1.07E+4	3.21E+2	6.42E+1	2.31E+2	2.29E+1	-2.49E+3
WDP	m3 world eq. deprived	1.03E+2	3.10E+0	2.30E-1	2.68E+0	1.06E+0	-2.56E+1

GWP-total = Global Warming Potential total
GWP-fossil = Global Warming Potential fossil fuels
GWP-biogenic = Global Warming Potential biogenic
GWP-luluc = Global Warming Potential land use and land use change
ODP = Depletion potential of the stratospheric ozone layer
AP = Acidification Potential, Accumulated Exceedence
EP-freshwater = Eutrophication Potential, fraction of nutrients reaching freshwater end compartment
EP-marine = Eutrophication Potential, fraction of nutrients reaching marine end compartment
EP-terrestrial = Eutrophication Potential, Accumulated Exceedence
POCP = Formation potential of tropospheric ozone photochemical oxidants
ADP-minerals&metals = Abiotic Depletion Potential for non fossil resources [2]
ADP-fossil = Abiotic Depletion for fossil resources potential [2]
WDP = Water (user) deprivation potential, deprivation-weighted water consumption [2]

Disclaimer [2]

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

ENVIRONMENTAL IMPACT per functional unit or declared unit (additional indicators A2)

	UNIT	A1-A3	A5	C2	C3	C4	D
PM	Disease incidence	2.41E-3	7.24E-5	3.83E-7	2.38E-6	1.47E-7	-5.28E-4
IRP	kBq U235 eq.	7.15E+1	2.14E+0	2.69E-1	1.04E+0	9.35E-2	-1.57E+1
ETP-fw	CTUe	4.74E+3	1.42E+2	5.73E+1	5.44E+2	1.27E+1	-1.45E+3
HTP-c	CTUh	1.81E-6	5.43E-8	1.86E-9	1.69E-8	3.23E-10	-4.47E-7
HTP-nc	CTUh	2.66E-6	7.99E-8	6.27E-8	7.32E-7	1.02E-8	7.42E-7
SQP	---	1.65E+3	4.96E+1	5.57E+1	4.30E+2	4.83E+1	-3.85E+2

PM = Potential incidence of disease due to PM emissions
IRP = Potential Human exposure efficiency relative to U235 [1]
ETP-fw = Potential Comparative Toxic Unit for ecosystems [2]
HTP-c = Potential Comparative Toxic Unit for humans [2]
HTP-nc = Potential Comparative Toxic Unit for humans, non-cancer [2]
SQP = Potential soil quality index [2]

Disclaimer [1]

- This impact category deals mainly with the eventual impact of low dose ionizing radiation on human health of the nuclear fuel cycle. It does not consider effects due to possible nuclear accidents, occupational exposure nor due to radioactive waste disposal in underground facilities. Potential ionizing radiation from the soil, from radon and from some construction materials is also not measured by this indicator.

Disclaimer [2]

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

RESOURCE USE per functional unit or declared unit (A1 / A2)

	UNIT	A1-A3	A5	C2	C3	C4	D
PERE	MJ	7.56E+2	2.27E+1	8.04E-1	6.75E+1	1.17E+0	-1.65E+2
PERM	MJ	0.00	0.00	0.00	0.00	0.00	0.00
PERT	MJ	7.56E+2	2.27E+1	8.04E-1	0.00	5.84E-1	-1.65E+2
PENRE	MJ	1.12E+4	3.36E+2	6.82E+1	4.91E+2	4.87E+1	-2.45E+3
PENRM	MJ	0.00	0.00	0.00	0.00	0.00	0.00
PENRT	MJ	1.12E+4	3.36E+2	6.82E+1	2.46E+2	2.44E+1	-2.45E+3
SM	kg	1.14E+3	3.42E+1	0.00	0.00	0.00	-2.50E+2
RSF	MJ	0.00	0.00	0.00	0.00	0.00	0.00
NRSF	MJ	0.00	0.00	0.00	0.00	0.00	0.00
FW	m3	4.19E+0	1.26E-1	7.82E-3	7.34E-2	2.46E-2	-9.16E-1

PERE = Use of renewable energy excluding renewable primary energy resources
PERM = Use of renewable energy resources used as raw materials
PERT = Total use of renewable primary energy resources
PENRE = Use of non-renewable primary energy resources excluding non-renewable energy resources used as raw materials
PENRM = Use of non-renewable primary energy resources used as raw materials
PENRT = Total use of non-renewable primary energy resources
SM = Use of secondary materials
RSF = Use of renewable secondary fuels
NRSF = Use of non renewable secondary fuels
FW = Use of net fresh water

OUTPUT FLOWS AND WASTE CATEGORIES per functional unit or declared unit (A1 / A2)

	UNIT	A1-A3	A5	C2	C3	C4	D
HWD	kg	1.12E-2	3.35E-4	1.63E-4	2.79E-4	1.61E-5	-2.44E-3
NHWD	kg	8.53E+1	2.56E+0	4.08E+0	6.71E+0	1.50E+2	-1.86E+1
RWD	kg	8.49E-2	2.55E-3	4.22E-4	1.33E-3	1.49E-4	-1.86E-2
CRU	kg	0.00	0.00	0.00	0.00	0.00	2.19E+2
MFR	kg	1.75E+2	3.00E+1	0.00	0.00	0.00	6.31E+2
MER	kg	0.00	0.00	0.00	0.00	0.00	0.00
EEE	MJ	0.00	0.00	0.00	0.00	0.00	0.00
ETE	MJ	0.00	0.00	0.00	0.00	0.00	0.00

HWD = Hazardous Waste Disposed
NHWD = Non Hazardous Waste Disposed
RWD = Radioactive Waste Disposed
CRU = Components for reuse
MFR = Materials for recycling
MER = Materials for energy recovery
EEE = Exported Electrical Energy
ETE = Exported Thermal Energy

BIOGENIC CARBON CONTENT per functional unit or declared unit (A1 / A2)

	UNIT	A1-A3	A5	C2	C3	C4	D
BCCpr	kg C	0.00	0.00	0.00	0.00	0.00	0.00
BCCpa	kg C	0.00	0.00	0.00	0.00	0.00	0.00

BCCpr = Biogenic carbon content in product
BCCpa = Biogenic carbon content in packaging

CALCULATION RULES

In the life cycle assessment the following is included in this study:

Production (A1-A3)

Modules A1-A3 of the EcoSheetPiles™ production include the following:
- The provision of resources, additives, and energy;
- Transport of resources and additives to the production site;
- Production processes on-site including energy (traditional electricity mix);
- Production of additives, disposal of production residues, and consideration of related emissions;
- Recycling of production/manufacturing scrap. Steel scrap is assumed to reach the end-of-waste status once is shredded and sorted, thus becomes input to the product system in the inventory.

The data for the production process (A3) were collected in 2019

Construction (A4-A5)

Because transport can differ per location, this has not been included in the LCA. A4 can be calculated in accordance with the values in the remarks specified for a tonkm.
The equipment needed during the construction phase is not within ArcelorMittal's sphere of influence and can differ greatly per location and installation technique. Therefore this phase has not been included, the contractors can determine this themselves on the basis of project data.
The default scenario for construction waste in A5 (3%) is included in the calculation.

Use stage (B1-B7)

This stage consists of the impacts arising from components of the building and construction works during their use. If these impacts arise depends per project and application and is not within ArcelorMittal's sphere of influence. Therefore this phase has not been included, if emissions are expected in the use phase the contractors can determine this themselves based on project data.

Demolition phase (C1)

The equipment needed during the demolition phase is not within ArcelorMittal's sphere of influence and can differ greatly per location and extraction technique. Therefore this phase has not been included, the contractors can determine this themselves based on project data.

End of life stage (C2-C4)

This EPD includes the necessary transport (C2) from the demolition site to the sorting location and distance to final disposal. The end of life stage includes the final disposal to landfill (C4), incineration (C3) and needed recycling processes up to the end-of-waste point (C3). Loads and benefits of recycling, reuse and exported energy are part of module D.

For the waste profiles, the profiles of the Steel Federation are used, these profiles are applicable for the Netherlands.

Supplementary information outside the building life cycle (D)
This stage contains the potential loads and benefits of recycling and reuse of raw materials/products. The loads contain the necessary recycling processes from end-of-waste-point up to the point-of-equivalence of the substituted primary raw material, and a load for secondary material that will be lost at the end-of-life stage. The loads and benefits of recycling and reuse are included in this module. The benefits are calculated based on the primary content and the primary equivalent.
After collection, the needed external scrap in the steel converter is fed back into the production. The recycling potential is then calculated considering the net scrap.

End of Waste point (in accordance with the steel federation waste profile March 2020)
The iron or steel scrap is segregated at the source or while collecting and is kept separate; or the input waste is treated to separate the iron and steel scrap from the non-metal and nonferrous components. All mechanical treatment (like cutting, shearing, shredding or granulating; sorting, separating, cleaning, de-polluting, emptying) needed to prepare the material for direct input into final use, has been completed. [End-of-waste Criteria for Iron and Steel Scrap: Technical Proposals, Publications Office of the European Union, 2010]

Allocation in the foreground data
Steel production generates a number of co-products that are sold to and used by other industries. These include mainly slags from Blast Furnace - Basic Oxygen Furnace or Electric Arc Furnace. The processes that produce these co-products cannot be further subdivided into sub-processes related to each co-product, so allocation is required. The allocation method used here was developed by the World Steel Association and EUROFER to be in line with CEN EN 15804 /EN 15804/. The methodology is based on physical allocation and takes account which changes in inputs and outputs affect the production of co-products. The method also takes account of material flows that carry specific inherent properties. This method is deemed to provide the most representative partitioning of the processes involved.
Economic allocation was considered, as slag is considered a low-value co-product under EN 15804. However, as neither hot metal nor slag are tradable products upon leaving the blast furnace, economic allocation would most likely be based on estimates. [World Steel Association, 2014: A methodology to determine the LCI of steel industry co-products].

Cut-off criteria
Measurement of on-site emissions were performed by ArcelorMittal and those emissions are considered. The specific emissions that are linked to the provision of thermal and electrical energy are also considered in the specific processes. All reported data are incorporated and modelled using the best available LCI data. Data for the sites were cross-checked with one another to identify potential data gaps. No processes, materials or emissions that are known to make a significant contribution to the environmental impact of the products studied have been omitted. On this basis, there is no evidence to suggest that input or outputs contributing more than 1% to the overall mass or energy of the system - or that are environmentally significant - have been omitted. It can be assumed that all excluded flows contribute less than 5% to the impact assessment categories. Packaging materials and its transportation are neglected due to low contribution to the overall life cycle results. The capital goods are included in the calculation.

Assumptions and approximations

In this study, primary data was used to model all on-site processes. This data was cross-checked to identify and eliminate data gaps. Secondary data (from Ecoinvent database) was as technologically and geographically representative as possible.

Data quality

The foreground data collected by the manufacturer are based on yearly production amounts and extrapolations of measurements on specific machines and plants. The production data refers to 2019. Most of the necessary life cycle inventories for the basic materials are available in the Ecoinvent database.

SCENARIOS AND ADDITIONAL TECHNICAL INFORMATION

Transport (A4)

The transport distance to the construction site can differ per project. The ECI Environmental Cost Indicator (ECI) or in Dutch the Milieu Kosten Indicator (MKI) can be determined by calculating the actual transport distance (between factory and construction site). The factory adres is 296 Bd Charles de Gaulle, 4083 Esch-sur-Alzette, Luxembourg; The actual transport distance must be multiplied by the following MKI values per ton-km:
Euro 6 truck >lorry : 0,00891 MKI
Inland vessel : 0,005579175 MKI

Construction (A5) and demolition (C1) phase

The equipment used in the construction phases (A5) and the demolition phase (C1) are not within ArcelorMittal's sphere of influence and can differ greatly per location and installation/extraction technique. For this reason, this phase has not been included. These values must be entered project-specifically based on the actual use of equipment. The default scenario for construction waste in A5 (3%) is included in the calculation. This percentage can be adjusted to make it project specific.

End of life phase (C2-C4) and module D

The document "LCA Report category 3 data National Environmental Database: H41 Foundation structures - Steel sheet piling" is updated in May 2022. In this document, the end-of-life scenarios are revised, partly based on input from ArcelorMittal. Five scenarios are discussed. The scenarios are weighted by market share to arrive at a weighted average. Assumptions were made for corrosion on the basis of lifetime and the required sheet pile profile. This gives an average scenario of 15% landfill, 25% reuse and 60% recycling.

Ultimately, the user must determine his project-specific scenario, which can be done using the three 100% scenarios. The project-specific end-of-life scenario can be calculated by multiplication the actual ratios between reuse, recycling and landfill multiplied by the MKI as declared in the table.
- 100% reuse;
- 100% recycling;
- 100% landfill;

Assumptions Reuse:

Transport (C2) is allocated to the new product. Environmental benefits for reuse are included. The quality factor for reuse is 7/8. The portion that cannot be reused (1/8) is recycled.

Assumptions Recycling:
Transport (C2) and the processing to scrap for the next life cycle (C3) are included.

Assumptions Landfill:
This end-of-life scenario is used for corrosion and/or in case the sheet piles remain in the ground. The processes for C2, C3 and C4 are included, but have no value. Module D does have a value because raw materials are lost from the supply chain, for which compensation has to be made.

The results of the end-of-life stages (C2-D) are as follow:

Waste scenario	MKI C2	MKI C3	MKI C4	MKI D	MKI total end-of-life phase C2-4 and D
100% reuse, quality factor 7/8	0.10	0.66	0.00	-41.62	-40.86
100% recycling	0.81	5.26	0.00	-2.37	3.70
100% landfill	0.00	0.00	0.73	140.39	141.12

DECLARATION OF SVHC

No substances listed on the "Candidate List of Substances of Very High Concern for Autorisation" by the European Chemicals Agency EC 1907-2006 are contained in the steel in declarable quantities.

REFERENCES

ISO 14040

ISO 14040:2006-10, Environmental management - Life cycle assessment - Principles and framework; EN ISO 14040:2006

ISO 14044

ISO 14044:2006-10, Environmental management - Life cycle assessment - Requirements and guidelines; EN ISO 14040:2006

ISO 14025

ISO 14025:2011-10: Environmental labels and declarations – Type III environmental declarations – Principles and procedures

EN 15804

EN 15804:2012-04+A1 2013: Sustainability of construction works – Environmental Product Declarations – Core rules for the product category of construction products

SBK-verification protocol

SBK-verification protocol – inclusion data in the Dutch environmental database, Final Version 3.0, January 2019, SBK

SBK-Assessment Method

Assessment Method Environmental Performance Construction and Civil Engineering Works (GWW), Version "3.0 January 2019" incl. amendments July 2019, Jan 2020, SBK

Protocol EPD-online

25011.16.03.015 - Protocol EPD online - NMD, version 1.2, November 2016, NIBE

EPD Ecosheetpiles tm

ArcelorMittal, declaration number: EPD-ARM-20180069-IBD1-EN
Background report:
MRPI EPD of ArcelorMittal construction steel products - EcoSheetPiles™ , Tinkstep, 19 June 2020

REMARKS

none