

Environmental Product Declaration

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



ENVIRONMENTAL FOOTPRINT INSTITUTE



SSAW & LSAW Steel Pipes

From

MCV Pipes & Fittings Trading L.L.C



Programme :

The EFI Program

Programme Operator :

The Environment Footprint Institute

EPD Registration No :

260204EPD CPR-3100

Issue Date :

19-02-2026

Valid Until :

18-02-2031

Geographical Scope :

United Arab Emirates

Reference Year :

2026



An EPD should provide current information and may be updated if conditions change. The stated validity is therefore subject to the continued registration and publication at MCV Pipes & Fittings Trading L.L.C

General Information

Programme :	The EFI Programme
Address :	The Environment Footprint Institute Calle Circe 49A Madrid, Spain
Website :	www.environmentalfootprintinstitute.com
Email :	info@environmentalfootprintinstitute.com

Product Category Rules (PCR)	
Product Category Rules (PCR)	
PCR review was conducted by: The Environmental Footprint Institute.	
Product category rules (PCR): Under the general rules of the Environmental Footprint Institute and PCR P-3100: Construction products in general (EN-15804)	
PCR review was conducted by: Environmental Footprint Institute	
Life Cycle Assessment (LCA)	
LCA accountability: CQES International LLC	
<input type="checkbox"/> Internal Verification	<input checked="" type="checkbox"/> Third Party Verification
Accredited by: THE ENVIRONMENTAL FOOTPRINT INSTITUTE	
Third party verifier: Manuel Rama Calle Circe 49A Madrid, Spain www.environmentalfootprintinstitute.com info@environmentalfootprintinstitute.com	
 ENVIRONMENTAL FOOTPRINT INSTITUTE	
Procedure for follow-up of data during EPD validity involves Internal verifier: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

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

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

Company Information

Owner of the EPD :

MCV Pipes & Fittings Trading L.L.C

Contact : Mario Carrino

Email: mario.carrino@mcbroker.com

Company Description :

MCV operates a LSAW, SSAW, SMLS, ERW pipe manufacturing facility in the UAE where the products covered by this EPD are produced. The company also supplies industrial products for the oil and gas, power generation, steel mills, foundries, and petrochemical sectors, operating globally with an experienced technical and commercial team and strong regional expertise.

MCV specializes in the manufacture and supply of LSAW, SSAW, SMLS, ERW steel pipes, valves, fittings, and flanges in accordance with international standards, dimensions, pressure ratings, and material grades, meeting customer specifications and applicable technical requirements.

The company operates on a continuous basis (24 hours per day, 7 days per week) to provide technical support and commercial services. An internal engineering department prepares technical documentation and project-specific drawings aligned with manufacturing and customer requirements.

The quality department monitors production and orders from manufacturing through delivery. Outgoing materials are verified and inspected by qualified internal inspectors, and acceptance documentation is issued in accordance with applicable inspection and testing requirements.

Certifications

MCV holds a comprehensive set of internationally recognized certifications, including EN ISO 9001:2015 for quality management, CE/PED EN 10204:2004 for compliance with European Pressure Equipment Directive, TNV ISO 27001:2022 for information security management, and IWZ ISO 14001:2015 for environmental management.

These certifications cover the company's operational processes, product supply, data protection, and environmental performance, and are maintained through regular audits by accredited certification bodies.



Product Information

Product Name : **SSAW & LSAW Steel Pipes**

Product identification : Prefabricated carbon steel pipes for industrial and infrastructure applications, available in spiral (SSAW) or longitudinal (LSAW) welded construction. Pipes are supplied with beveled ends and optional protective coatings as per project requirements.

Intended use: Conveyance of liquids and gases, structural applications, and process pipelines in the oil & gas, power generation, steel, petrochemical, and water industries. Pipes are suitable for onshore and offshore installations where compliance with international standards is required.

Key properties: The SSAW and LSAW steel pipes feature spiral or longitudinal welded construction, providing high mechanical strength and pressure resistance. They offer excellent corrosion resistance through optional protective coatings, maintain precise dimensional tolerances, and are suitable for high-temperature and high-pressure applications. The pipes are designed for long service life and reliable performance in industrial and infrastructure installations.

UN CPC Code : 4128 – Tubes, pipes and hollow profiles, of steel

Reference Service Life (RSL): 30 to 50 years, based on industry standards for welded steel pipes in typical infrastructure applications with appropriate corrosion protection and maintenance.

Geographical Scope: United Arab Emirates

Location of Production Site : Al Barsha Height, Tecom P.O. Box 391960, Dubai, UAE

Product Picture :



Product Description :

The SSAW and LSAW steel pipes are prefabricated carbon steel pipes available in spiral (SSAW) or longitudinal (LSAW) welded construction, with beveled ends and optional protective coatings according to project requirements. LSAW pipes have an external diameter range of 355.6 mm to 2320 mm, wall thickness from 5.0 mm to 60 mm, and standard lengths of 5.8 m, 6 m, 11.8 m, 12 m, 18 m, and 32 m. SSAW pipes have an external diameter range of 219 mm to 4064 mm, wall thickness from 3.2 mm to 40 mm, and the same standard lengths. These pipes are intended for the conveyance of liquids and gases, structural pipelines, and industrial process installations in the oil & gas, power generation, petrochemical, steel, and water industries, suitable for both onshore and offshore applications. The pipes feature spiral or longitudinal welded construction, providing high mechanical strength and pressure resistance, excellent corrosion resistance through optional protective coatings, precise dimensional tolerances, and suitability for high-temperature and high-pressure applications, ensuring long service life and reliable performance in industrial and infrastructure installations.

LCA Information

<u>Declared Unit :</u>	The declared unit of the Life Cycle Assessment is 1 tonne (1,000 kg) of SSAW and LSAW steel pipes, representing an average of all available diameters, wall thicknesses, and lengths. Environmental impacts and resource use are reported per tonne and can be scaled linearly for pipes of different dimensions based on their mass. This approach ensures that the LCA data is representative of all SSAW and LSAW pipe variants while remaining compliant with EN 15804 requirements.
<u>Time Representatives :</u>	The Life Cycle Inventory (LCI) data used in this EPD are representative of production activities during the reference period from January 2025 to December 2025.
<u>Database(s) and LCA software used:</u>	The LCA modelling and impact calculations were performed using Air. LCA™ software (version 3.20.1.0) in combination with the Ecoinvent™ database (version 3.11.0). The EN 15804 system model was applied for the assessment of environmental impacts, using the characterization factors from EN 15804:2012+A2:2019.
<u>Electricity usage in A3 :</u>	A specific dataset with the Life Cycle Inventory (LCI) corresponding to the electricity mix in UAE, has been used for this LCA. 0.5856 kg CO ₂ eq/kWh (GWP-GHG).
<u>Cut-off rules:</u>	All material, energy, and environmental flows contributing less than 1% of mass, energy, or environmental relevance are excluded from the life cycle assessment. The total of all excluded flows does not exceed 5% of the total mass, energy, or environmental impact of the product system. This cut-off approach ensures that the assessment captures the majority of relevant inputs and outputs while maintaining compliance with EN 15804 requirements.
<u>Allocation method:</u>	Environmental impacts are allocated on a mass basis per EN 15804. Shared process energy and emissions are distributed proportionally to product mass. No co-products arise from manufacturing.
<u>Description of system boundaries:</u>	<p>This EPD follows a cradle-to-gate with options approach in accordance with EN 15804. It covers Modules A1–A3 (raw material supply, transport to the manufacturing site, and pipe manufacturing), Module A4 (transport to the construction or installation site), and Module A5 (installation at the site). In addition, end-of-life Modules C1–C4 (deconstruction/demolition, transport, waste processing, and disposal) and Module D (benefits and loads beyond the system boundary, e.g., steel recycling) are included based on standardized and scenario-based assumptions applicable to SSAW and LSAW steel pipes.</p> <p>Use-stage Modules B1–B7 are excluded, as steel pipes are industrial and infrastructure products whose environmental performance during use depends on specific process conditions, operating pressures, and installation, which are outside the declared scope of this EPD.</p>

Raw Material Supply (A1)



Transport to Manufacturer (A2)



Pipe Manufacturing (A3)



**End-of-Life (C1-C4)
& Recycling (D)**



Installation (A5)



Transport to Site (A4)

Core Processes

A1-Raw Material Supply: Module A1 covers the extraction, processing, and delivery of raw materials used in the production of SSAW and LSAW steel pipes. This includes hot-rolled steel coils for SSAW pipes and steel plates for LSAW pipes, produced via BOF (primary) or EAF (scrap-based) steel making routes, as well as welding consumables such as wire and flux, and optional coating materials for corrosion protection. Auxiliary materials, including packaging and lubricants, are also included. Environmental impacts from energy use, emissions, and resource consumption associated with these materials and their transport to the pipe manufacturing facility are accounted for in this module, representing the cradle stage of the product life cycle.

A2 - Transport: Module A2 includes the transportation of all raw materials and ancillary materials from suppliers to the manufacturing site. Transport impacts are modeled based on average transport distances, transport modes, and load factors representative of the supply chain. Transport of raw materials to production site is taken as the weight average values for transport from supplier for the year of 2025.

- Vehicle used for transport - 3.5-7.5t & >32t trucks, Euro 5
- Vehicle capacity - 3.5 -7.5 tons and 25 tons
- Fuel type and consumption - Diesel, 0.38 liters per km
- Bulk transportation - Mass of the transported product.

A3 - Manufacturing: Module A3 covers the production of submerged arc welded steel pipes (SSAW and LSAW) at the facility, including steel plate or coil preparation, edge forming, welding (spiral or longitudinal), mechanical expansion, non-destructive testing, heat treatment if required, surface finishing, inspection, and packaging. This stage also includes the production and transport of packaging materials (metal strapping and wooden pallets/logs), delivered by >32t diesel trucks (Euro 5) over an average distance of 50 km.

Manufacturing waste, such as steel scrap from edge trimming and end-cutting operations, is collected, mechanically processed, and transported for recycling using >32t diesel trucks (Euro 5) over an average distance of 50 km. All energy inputs, emissions, and waste flows are accounted for in accordance with EN 15804.

A4 - Transportation of Goods:

Module A4 covers the transport of finished SSAW and LSAW steel pipes from the manufacturing facility to the construction or installation site. Transport is modeled using >32t diesel trucks (Euro 5) with a capacity of 25 tons and a fuel consumption of 0.38 liters per km, consistent with the transport assumptions applied in Module A2. Environmental impacts from fuel combustion, energy use, and emissions are included in this module based on representative transport distances and load factors.

A5 – Installation at Site

Module A5 includes the installation of SSAW and LSAW steel pipes at the project site, covering energy use for cutting, welding, and handling activities, as well as minor consumables and material losses. Packaging waste generated during installation is also considered. All related energy, material use, emissions, and waste flows are included in accordance with EN 15804 requirements.

End-of-Life Modules (C1–C4)

C1 – Deconstruction / Demolition :

Module C1 covers the energy required to dismantle or deconstruct SSAW and LSAW steel pipes at the end of their service life. The energy demand for demolition is estimated at approximately 0.89 MJ per tonne of pipe, based on industry-average values for industrial steel piping and infrastructure projects (EPD International, 2020; EN 15804+A2). This energy primarily reflects electricity and fuel consumption associated with pipe removal and handling activities. All energy use is included in the life cycle inventory in accordance with EN 15804 requirements.

C2 – Transport :

Module C2 accounts for the transportation of demolished pipe scrap to recycling and disposal sites. For pipe scraps, the assumed transport distance to recycling or disposal facilities is 50 km by road, based on UAE average distances. Transport is modeled using >32t diesel trucks (Euro 5) with a capacity of 25 tons and a fuel consumption of 0.38 liters per km, consistent with the transport assumptions applied in Module A2. All associated fuel combustion emissions and environmental impacts are included in this module.

C3 – Waste Processing

Module C3 covers the treatment of waste generated at the end of life of SSAW and LSAW steel pipes. This includes mechanical processing and recycling of steel and other recoverable materials. All recyclable steel content is directed to appropriate recycling streams, ensuring recovery of material value and reduction of environmental impacts. Energy use, emissions, and resource consumption associated with waste processing are included in this module in accordance with EN 15804 requirements.

C4 – Disposal :

Module C4 covers the final disposal of non-recoverable materials from SSAW and LSAW steel pipes at the end of their service life. In the UAE, it is assumed that approximately 5% of the total pipe mass (mainly coatings, minor auxiliaries, and non-recyclable packaging) is sent to landfill or incineration, while the remainder is recovered or recycled (UAE Ministry of Climate Change and Environment, 2021). Environmental impacts associated with disposal, including energy use, emissions, and resource consumption, are accounted for in this module in accordance with EN 15804 requirements.

Module D – Benefits and Loads Beyond the System Boundary :

Module D accounts for the environmental benefits from recycling SSAW and LSAW steel pipes at the end of their service life. It is assumed that 95% of the pipe mass is recovered and sent to secondary steel production, providing a credit for avoided production of primary steel.

The remaining 5% represents non-recoverable materials that are disposed of according to Module C4. Environmental benefits include reduced resource consumption, energy savings, and avoided greenhouse gas emissions, in accordance with EN15804 requirements and standard LCA methodology for steel recycling (World Steel Association, 2020).

More Information

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

Module	Product Stage			Construction Process Stage		Use Stage	End of life stage				Resource recovery stage
	Raw material supply	Transport	Manufacturing	Transport	Construction installation	Use, maintenance, repair, replacement, refurbishment, operational energy and water use	De-construction demolition	Transport	Waste processing	Disposal	Reuse-Recovery-Recycling-potential
Module	A1	A2	A3	A4	A5	B1-B7	C1	C2	C3	C4	D
Modules declared	X	X	X	X	X	ND	X	X	X	X	X
Geography	AE	AE	AE	AE	AE	--	AE	AE	AE	AE	AE
Specific data used	>90%			--	--	--	--	--	--	--	--

Legend: X = Included | ND = Not Declared | AE = United Arab Emirates

Assumptions :

The life cycle assessment of SSAW and LSAW steel pipes represents an average of all diameters, wall thicknesses, and lengths, with the declared unit of 1 tonne of finished pipe delivered ex-works. The system boundary follows a cradle-to-gate with options approach (Modules A1-A3, A4-A5) and includes end-of-life stages (Modules C1-C4) and recycling benefits (Module D), while use-phase modules (B1-B7) are excluded.

All flows contributing less than 1% of mass, energy, or environmental relevance are omitted, with total exclusions below 5%. Environmental impacts are allocated on a mass basis, with recycled steel credited according to EN15804 and shared process energy and emissions distributed proportionally.

Transport distances, energy consumption, and material inputs are based on average UAE/GCC conditions. At end-of-life, it is assumed that 95% of the pipe mass is recovered and sent to steel recycling, while 5% of materials, including coatings and minor auxiliaries, are disposed of via landfill or energy recovery. The energy demand for dismantling and deconstruction is included, and all associated environmental impacts are accounted for in the life cycle inventory in accordance with EN 15804 requirements.

Content Information

Product Content:

Product Components	Weight %	Post-Consumer material weight -%	Biogenic material, kg C/kg
Carbon Steel	98-99	0	0
Welding Consumables	0.5-1	0	0
Oil & Lubricants	0.1-0.2	0	0
Total	100	0	0

Packaging Material Content:

Packaging Material	Weight (kg)/DU	Weight % (Versus the Product)	Weight biogenic carbon, kg C/kg
Metal Strap	5.00E-03	5.00E-01	0.00E+00
Wooden Pallets/Logs	2.00E-02	2.00E+00	8.90E-03

Dangerous substances from the candidate list of SVHC for Authorisation:

Dangerous substances from the candidate list of SVHC for Authorisation:	EC No.	CAS No.	Weight-% per declared unit
None	--	--	--
None	--	--	--

Biogenic carbon content:

Biogenic carbon content	A1-A3/Unit
Biogenic carbon content in product	0.00E+00 kg C
Biogenic carbon content in accompanying packaging	8.90E-03 kg C

Manufacturing Process:

The production of SSAW and LSAW steel pipes begins with the supply of hot-rolled steel coils for SSAW pipes and steel plates for LSAW pipes. Raw materials are transported to the manufacturing facility (Module A2) where SSAW pipes are formed by shaping steel coils into spiral pipe profiles, followed by spiral submerged arc welding, sizing or expansion as needed, non-destructive testing, optional heat treatment, surface coating, inspection, and packaging. LSAW pipes are produced by forming steel plates using UOE or JCO methods, followed by longitudinal submerged arc welding, mechanical expansion or sizing, non-destructive testing, optional heat treatment, surface coating, inspection, and packaging. All energy, material inputs, emissions, and production-related waste are accounted for in Module A3. The finished pipes are then transported to the construction or installation site (Module A4) and prepared for installation (Module A5), completing the cradle-to-gate manufacturing process.

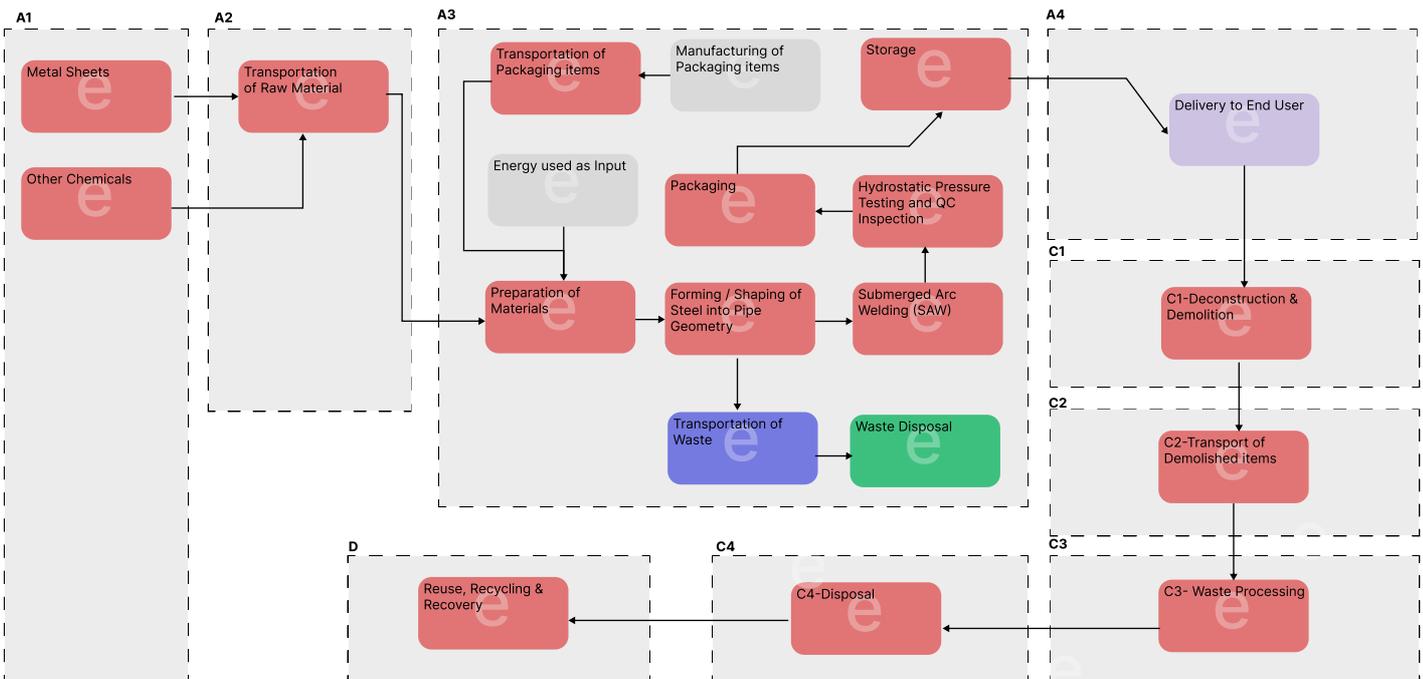
Technical information:

For more technical information about the LSAW and SSAW Pipes, please refer to the product catalog, MTC.

Data quality:

The life cycle inventory data used for this EPD of SSAW and LSAW steel pipes are based on a combination of primary data from the manufacturer, supplier information, and representative secondary datasets for steel production, welding, coatings, and transport. The data reflect current technology and practices in the UAE and GCC region, with reference years 2025. Data quality is considered high, with temporal representatives within ±3 years of the study period, geographical relevance aligned with regional production and transport, and technological representatives reflecting typical industrial processes for spiral and longitudinal welded steel pipes. Where secondary data were used, reliable industry-average or peer-reviewed datasets were selected to ensure consistency and compliance with EN 15804 and ISO 14044 requirements.

Life Cycle Assessment Modelling



Environmental Performance

Potential Environment Impacts

The potential environmental impacts of SSAW and LSAW steel pipes are assessed across their life cycle using life cycle assessment methodology in accordance with EN15804. Key impact categories include global warming potential (GWP), acidification potential (AP), eutrophication potential (EP), photochemical ozone creation potential (POCP), abiotic depletion of elements (ADP elements), abiotic depletion of fossil resources (ADP fossil), and water use. Impacts arise primarily from raw material extraction and processing (Module A1), pipe manufacturing (Module A3), and transport (Modules A2, A4–A5), with additional contributions from end-of-life processes (Modules C1–C4) and recycling benefits (Module D). Energy consumption, emissions to air, water, and soil, and material use are included in the assessment.

Regional factors, such as the UAE electricity grid mix and transport distances, are considered to ensure accurate representation of environmental burdens. The results provide a comprehensive overview of the environmental performance of SSAW and LSAW steel pipes per declared unit of 1 tonne.

Core Environmental Impact Indicators

Impact category indicators according to EN 15804 (Results per declared unit)																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-Total	kg CO ₂ eq.	3.39E+03	1.09E+02	8.41E-01	ND	3.62E+00	9.90E+00	4.95E+01	3.13E-01	-8.74E+02						
GWP-fossil	kg CO ₂ eq.	3.39E+03	1.09E+02	5.83E-01	ND	3.62E+00	9.89E+00	2.01E+01	3.13E-01	-8.74E+02						
GWP-biogenic	kg CO ₂ eq.	4.81E+00	2.19E-02	2.58E-01	ND	3.61E-04	2.27E-03	2.94E+01	9.70E-05	6.43E-01						
GWP-luluc	kg CO ₂ eq.	1.93E+00	6.10E-02	3.88E-04	ND	3.71E-04	4.54E-03	2.38E-02	1.79E-04	-2.94E-01						
ODP	kg CFC 11 eq.	3.26E-05	1.46E-06	9.21E-09	ND	5.38E-08	1.34E-07	1.15E-07	8.71E-09	-4.40E-06						
AP	mol H ⁺ eq.	1.45E+01	1.66E+00	4.66E-03	ND	3.24E-02	2.37E-02	1.31E-01	2.19E-03	-3.61E+00						
EP-freshwater	kg P eq.	1.48E+00	8.15E-03	1.38E-02	ND	1.17E-04	1.08E-03	9.40E-03	2.74E-05	-6.80E-01						
EP-marine	kg N eq.	3.56E+00	3.96E-01	1.20E-03	ND	1.51E-02	5.52E-03	6.29E-02	8.44E-04	-1.30E-01						
EP-terrestrial	mol N eq.	3.43E+01	4.39E+00	1.14E-02	ND	1.65E-01	5.88E-02	3.86E-01	9.19E-03	-9.24E+00						
POCP	kg NMVOC eq.	1.27E+01	1.29E+00	4.20E-03	ND	4.94E-02	3.21E-02	1.27E-01	3.32E-03	-3.27E+00						
ADP-minerals & metals*	kg Sb eq.	2.24E-02	2.42E-04	3.23E-06	ND	1.26E-06	3.30E-05	3.92E-04	4.55E-07	-1.17E-02						
ADP-fossil*	MJ	4.18E+04	1.42E+03	9.35E+00	ND	4.72E+01	1.37E+02	1.69E+02	7.66E+00	-9.43E+03						
WDP*	m ³	8.27E+02	6.10E+00	-3.15E+00	ND	1.23E-01	7.75E-01	3.12E+00	3.39E-01	-1.37E+03						
Acronyms	GWP-fossil = Global Warming Potential fossil fuels; GWP-biogenic = Global Warming Potential biogenic; GWP-luluc = Global Warming Potential land use and land use change; ODP = Depletion potential of the stratospheric ozone layer; AP = Acidification potential, Accumulated Exceedance; EP-freshwater = Eutrophication potential, fraction of nutrients reaching freshwater end compartment; EP-marine = Eutrophication potential, fraction of nutrients reaching marine end compartment; EP-terrestrial = Eutrophication potential, Accumulated Exceedance; POCP = Formation potential of tropospheric ozone; ADP-minerals&metals = Abiotic depletion potential for non-fossil resources; ADP-fossil = Abiotic depletion for fossil resources potential; WDP = Water (user) deprivation potential, deprivation-weighted water consumption															

Note on Declared Modules:

*CO₂ emissions from fuel combustion in A3 were calculated using standard carbon content factors and the 44/12 molecular weight ratio, in accordance with IPCC guidelines.

Use of Natural Resources

Resource use indicators (Results per declared unit)																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
PERE	MJ	3.39E+03	1.65E+01	2.40E-01	ND	2.96E-01	1.93E+00	2.40E+01	7.16E-02	-1.21E+03						
PERM	MJ	4.19E+02	0.00E+00	0.00E+00	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00						
PERT	MJ	3.81E+03	1.65E+01	2.40E-01	ND	2.96E-01	1.93E+00	2.40E+01	7.16E-02	-1.21E+03						
PENRE	MJ	4.16E+04	1.42E+03	9.35E+00	ND	4.72E+01	1.37E+02	1.69E+02	7.66E+00	-9.43E+03						
PENRM	MJ	2.69E+02	0.00E+00	0.00E+00	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00						
PENRT	MJ	4.18E+04	1.42E+03	9.35E+00	ND	4.72E+01	1.37E+02	1.69E+02	7.66E+00	-9.43E+03						
SM	kg	4.17E+02	7.13E-01	4.83E-03	ND	1.95E-02	6.12E-02	3.05E-01	1.91E-03	4.78E+02						
RSF	MJ	1.49E+01	4.98E-03	1.75E-04	ND	5.12E-05	7.94E-04	2.42E-02	3.98E-05	-9.64E-02						
NRSF	MJ	8.92E-01	0.00E+00	0.00E+00	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00						
FW	m ³	7.94E+02	1.49E-01	-7.33E-02	ND	3.02E-03	1.89E-02	8.12E-02	7.92E-03	-3.29E+01						
Acronyms	PERE = Use of renewable primary energy excluding renewable primary energy resources used as raw materials; PERM = Use of renewable primary energy resources used as raw materials; PERT = Total use of renewable primary energy resources; PENRE = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials; PENRM = Use of non-renewable primary energy resources used as raw materials; PENRT = Total use of non-renewable primary energy re-sources; SM = Use of secondary material; RSF = Use of renewable secondary fuels; NRSF = Use of non-renewable secondary fuels; FW = Use of net fresh water															

Environmental Impact -GWP-GHG

Additional mandatory and voluntary impact category indicators (Results per declared unit)																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
GWP-GHG	kg CO ₂ eq.	3.49E+03	1.10E+02	8.66E-01	ND	3.68E+00	9.97E+00	5.21E+01	3.20E-01	-9.33E+02						

End of Life - Outflows

Output flow indicators (Results per declared unit)																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00						
Material for recycling	kg	9.05E+01	8.00E-01	4.80E+00	ND	2.10E-04	1.57E-03	9.60E+02	8.30E-05	-2.95E-01						
Materials for energy recovery	kg	1.16E-02	6.39E-05	7.69E-07	ND	6.70E-07	9.30E-06	3.75E-05	1.47E-07	-7.13E-03						
Exported energy, electricity	MJ	8.56E+00	1.01E-01	3.27E-03	ND	2.23E-03	1.16E-02	8.21E-02	4.97E-04	-1.88E+00						
Exported energy, thermal	MJ	1.31E+01	1.32E-01	1.21E-03	ND	1.05E-03	2.07E-02	2.32E-02	2.64E-04	-8.21E+00						

End of Life - waste

Waste indicators (Results per functional or declared unit)																
Indicator	Unit	A1-A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Hazardous waste disposed	kg	9.77E+02	2.76E+00	2.89E-02	ND	5.29E-02	3.13E-01	1.78E+00	8.72E-03	-4.55E+02						
Non-hazardous waste disposed	kg	1.29E+04	4.80E+01	5.38E+01	ND	7.71E-01	6.03E+00	7.16E+01	2.02E-01	8.08E+03						
Radioactive waste disposed	kg	3.74E-02	2.31E-04	2.80E-06	ND	4.93E-06	2.73E-05	2.17E-04	1.12E-06	-4.83E-03						

Additional information

No additional information is provided.

Information related to Sector EPD

This is not sector EPD.

Differences versus previous versions

This is the first version of the EPD.

References

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