Environmental Product Declaration

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

Seamless Steel Pipes (SMLS)

From

MCV Pipes & Fittings Trading L.L.C

Programme :	**The EFI Program**
Programme Operator :	**The Environment Footprint Institute**
EPD Registration No :	**260203EPD 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 : Email :	www.environmentalfootprintinstitute.com info@environmentalfootprintinstitute.com

Product Category Rules (PCR)
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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
☐ **Internal Verification** ☑ **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
Procedure for follow-up of data during EPD validity involves Internal verifier: ☐ Yes ☑ 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@mcvbroker.com

Company Description :

MCV operates a LSAW, SSAW, SMLS, ERW steel 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 : **Seamless Steel Pipes (SMLS)**

Product identification : Prefabricated seamless carbon steel pipes for industrial and infrastructure applications, manufactured without a welded seam through hot finishing or cold drawing processes. Pipes are supplied with plain, beveled, or threaded ends and may include optional protective coatings or heat treatments as per project requirements.

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

Key properties: Seamless steel pipes are manufactured without welded joints, providing uniform strength, high pressure resistance, and reliable performance under high-temperature and high-pressure conditions. Optional coatings and heat treatments enhance corrosion resistance, ensuring long service life in demanding industrial and infrastructure applications.

UN CPC Code : 41281 – Tubes, pipes and hollow profiles, of steel

Reference Service Life (RSL): 25 years, based on industry practice for carbon steel seamless pipes in typical industrial applications when installed in accordance with relevant standards and under appropriate environmental conditions.

Geographical Scope: United Arab Emirates

Location of Production Site : Al Barsha, Dubai, UAE

Product Picture :

Product Description :

SMLS pipes are prefabricated carbon steel pipes manufactured without welded joints through hot-finished or cold-drawn processes. They are supplied with plain, beveled, or threaded ends and may include optional protective coatings and heat treatments according to project requirements. SMLS pipes are typically available in external diameter ranges from approximately 21 mm to 660 mm, with wall thicknesses from about 2.0 mm to 75 mm, and standard lengths up to 12 m.

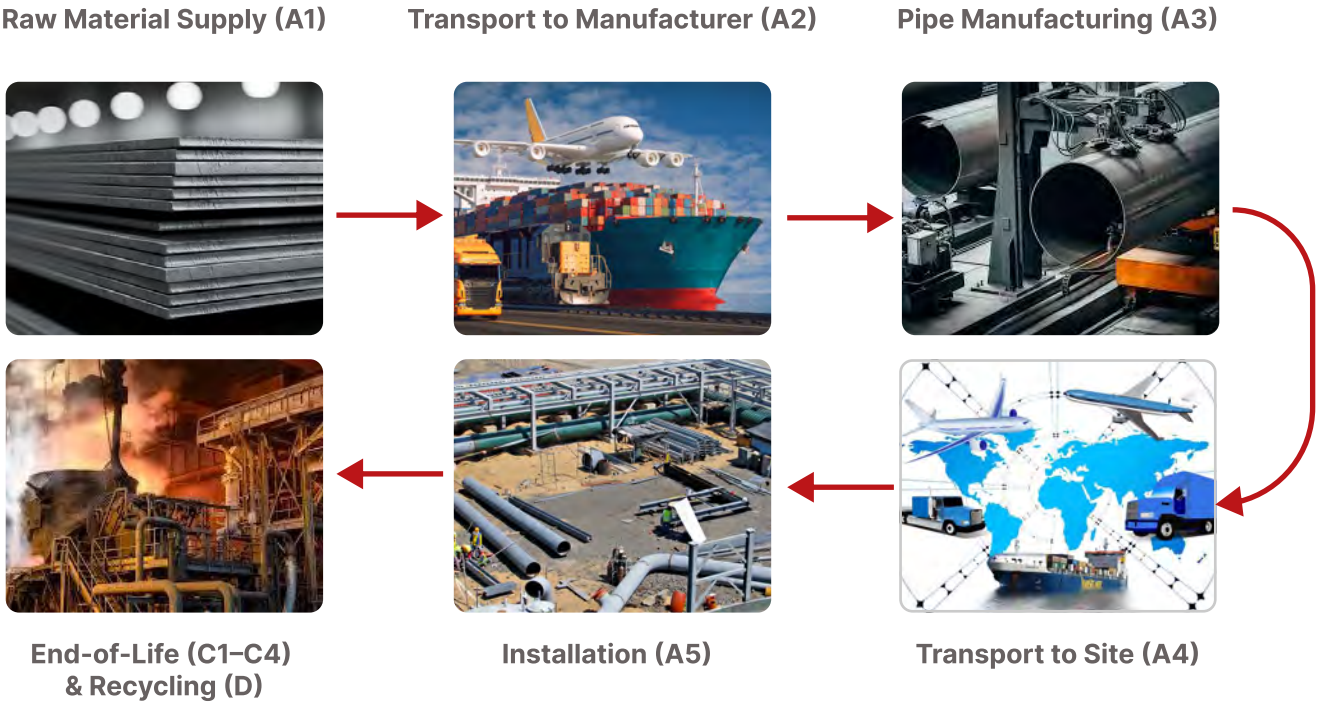
These pipes are intended for the conveyance of liquids and gases, structural and mechanical applications, and industrial process pipelines in the oil & gas, power generation, petrochemical, steel, and water industries, suitable for both onshore and offshore installations. The seamless construction provides uniform mechanical properties, high pressure resistance, and superior performance under high-temperature and high-pressure conditions. Optional protective coatings and heat treatments enhance corrosion resistance, dimensional accuracy, and durability, ensuring long service life and reliable performance in demanding industrial and infrastructure applications.

LCA Information

Declared Unit :	The declared unit of the Life Cycle Assessment is 1 tonne (1,000 kg) of seamless steel pipes (SMLS), 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 SMLS pipe variants while remaining compliant with EN 15804 requirements.
Time Representatives :	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.
Database(s) and LCA software used:	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.
Electricity usage in A3 :	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 CO2eq/kWh (GWP-GHG) as per UAE electricity dataset in Ecoinvent 3.11 used in the model.
Cut-off rules:	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.
Allocation method:	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.

Description of system boundaries:

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 SMLS steel pipes.
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.



Core Processes

A1-Raw Material Supply: Module A1 covers the extraction, processing, and preparation of raw materials used in the production of seamless steel pipes (SMLS). This primarily includes the production of steel billets used as input for pipe manufacturing, as well as alloying elements and ancillary materials required to meet specified chemical and mechanical properties. Environmental impacts associated with raw material extraction, steel production, and billet casting are modelled using representative datasets from the Ecoinvent 3.11 database (EN 15804 system model), reflecting global steel production conditions adjusted to the UAE electricity context. All upstream energy use, emissions, and resource consumption related to steel billet production are included in accordance with EN 15804 requirements.

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 seamless steel pipes (SMLS) at the facility, including billet heating, piercing, hot rolling or cold drawing, heat treatment, testing, and packaging. This stage also includes the production and transport of packaging materials (metal strapping), delivered by >32t diesel trucks (Euro 5) over an average distance of 50 km.

Manufacturing waste, such as steel scrap from pipe end-cutting and finishing, 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 SMLS 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 SMLS 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 SMLS steel pipes at the end of their service life. The deconstruction process is modelled using representative datasets for demolition of steel infrastructure from the Ecoinvent database in accordance with EN 15804 requirements. This includes the electricity and fuel consumption associated with pipe removal, cutting, and handling activities. All related energy use and emissions are accounted for within the life cycle inventory for this module.

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 SMLS 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 SMLS 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 SMLS 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 EN 15804 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):

	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 GLO	AE	AE	AE	AE	--	AE	AE	AE	AE	AE
Specific data used	>90%			--	--	--	--	--	--	--	--

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

Assumptions :

The life cycle assessment of SMLS (Seamless) steel pipes is based on an average of all diameters, wall thicknesses, and lengths, with a declared unit of 1 tonne of finished pipe. 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 EN 15804, 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.

In contrast to welded pipes, SMLS pipes are manufactured by hot forming and piercing of solid billets, resulting in higher energy consumption during production (Module A3) and slightly different material flows. This assumption reflects the average production processes for seamless steel pipes in the UAE/GCC region.

Content Information

Product Content:

Product Components	Weight %	Post-Consumer material weight -%	Biogenic material, kg C/kg
Carbon Steel Billets	99.999	0	0
Lubricants	0.001	0	0
Epoxy Coating	0.003	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	4.69E-03	4.69E-01	0.00E+00
Wooden logs/Pallets	2.09E-02	2.09E+00	9.32E-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	9.32E-03 kg C

Manufacturing Process:

The production of SMLS steel pipes begins with the supply of solid steel billets, which are transported to the manufacturing facility (Module A2). At the facility, the billets are heated and pierced to form hollow shells, which are then hot-rolled and elongated to achieve the desired pipe diameter and wall thickness. This is followed by sizing or expansion as needed, non-destructive testing, optional heat treatment, surface coating, inspection, and packaging.

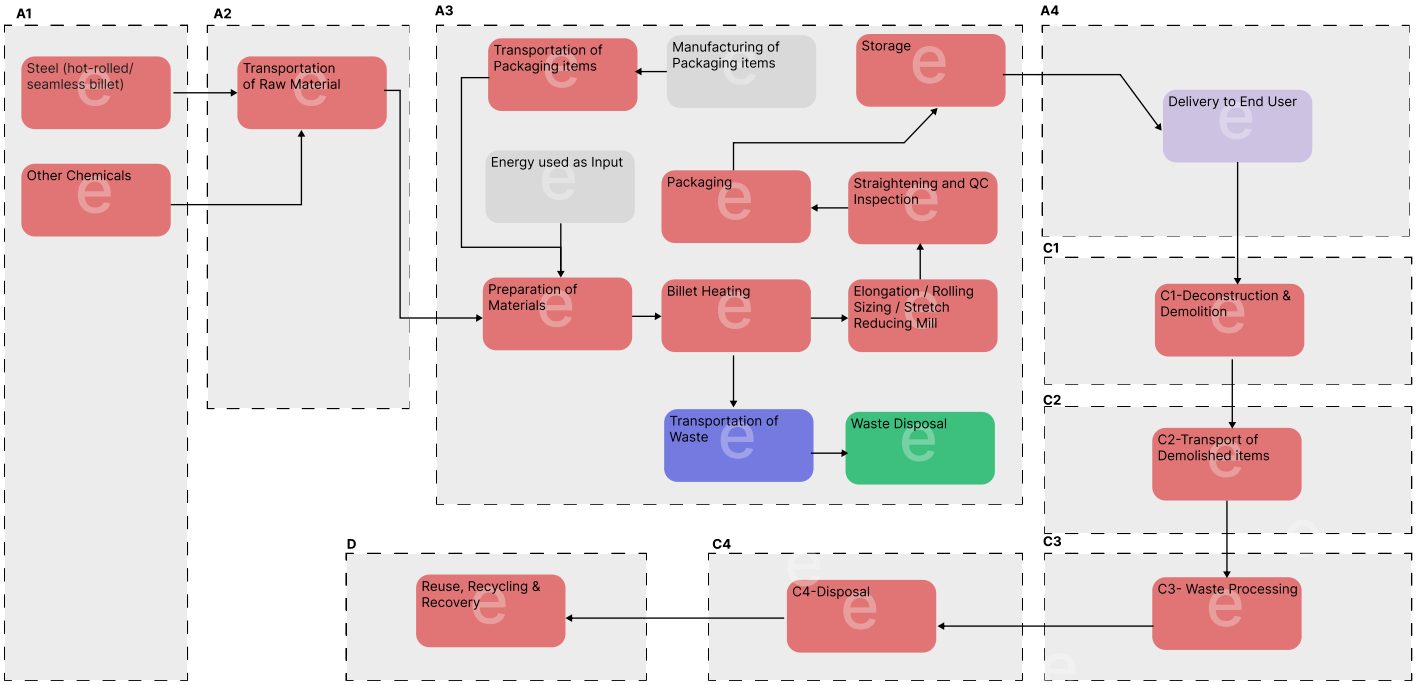
All energy use, material inputs, emissions, and production-related waste are accounted for in Module A3. The finished pipes are then transported to the construction or installation site (Module A4) and prepared for installation (Module A5), completing the cradle-to-gate manufacturing process for SMLS pipes.

Technical information:

For more technical information about the SMLS Pipes, please refer to the product catalog, MTC.

Data quality:
The life cycle inventory data for this EPD of seamless steel pipes (SMLS) are based primarily on production data collected directly from MCV's manufacturing operations, complemented by high-quality secondary datasets for steel billet production, coatings, and transport processes. The data represent actual industrial practices for seamless pipe manufacturing during the reference year 2025, with appropriate temporal, geographical, and technological representativeness within the UAE/GCC context. Secondary data from Ecoinvent 3.11 (EN 15804 system model) were used where necessary to ensure consistency and compliance with EN 15804+A2 and ISO 14044 requirements.

Life Cycle Assessment Modelling



Environmental Performance

Potential Environment Impacts

The potential environmental impacts of SMLS steel pipes are assessed across their life cycle using life cycle assessment methodology in accordance with EN 15804. 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 SMLS 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.	2.78E+03	1.09E+02	8.48E-01	ND	ND	ND	ND	ND	ND	ND	3.62E+00	9.90E+00	4.95E+01	3.13E-01	-9.52E+02
GWP-fossil	kg CO_2 eq.	2.78E+03	1.09E+02	5.93E-01	ND	ND	ND	ND	ND	ND	ND	3.62E+00	9.89E+00	2.01E+01	3.13E-01	-9.52E+02
GWP-biogenic	kg CO_2 eq.	2.82E+00	2.19E-02	2.54E-01	ND	ND	ND	ND	ND	ND	ND	3.61E-04	2.27E-03	2.94E+01	9.70E-05	5.12E-01
GWP-luluc	kg CO_2 eq.	1.78E+00	6.10E-02	3.91E-04	ND	ND	ND	ND	ND	ND	ND	3.71E-04	4.54E-03	2.38E-02	1.79E-04	-3.64E-01
ODP	kg CFC 11 eq.	2.11E-05	1.46E-06	9.50E-09	ND	ND	ND	ND	ND	ND	ND	5.38E-08	1.34E-07	1.15E-07	8.71E-09	-4.82E-06
AP	mol H^+ eq.	1.29E+01	1.66E+00	4.79E-03	ND	ND	ND	ND	ND	ND	ND	3.24E-02	2.37E-02	1.31E-01	2.19E-03	-3.94E+00
EP-freshwater	kg P eq.	1.36E+00	8.15E-03	1.44E-02	ND	ND	ND	ND	ND	ND	ND	1.17E-04	1.08E-03	9.40E-03	2.74E-05	-7.13E-01
EP-marine	kg N eq.	3.23E+00	3.96E-01	1.22E-03	ND	ND	ND	ND	ND	ND	ND	1.51E-02	5.52E-03	6.29E-02	8.44E-04	-2.57E-01
EP-terrestrial	mol N eq.	3.11E+01	4.39E+00	1.17E-02	ND	ND	ND	ND	ND	ND	ND	1.65E-01	5.88E-02	3.86E-01	9.19E-03	-9.97E+00
POCP	kg NMVOC eq.	1.09E+01	1.29E+00	4.31E-03	ND	ND	ND	ND	ND	ND	ND	4.94E-02	3.21E-02	1.27E-01	3.32E-03	-3.53E+00
ADP-minerals & metals*	kg Sb eq.	1.79E-02	2.42E-04	3.15E-06	ND	ND	ND	ND	ND	ND	ND	1.26E-06	3.30E-05	3.92E-04	4.55E-07	-1.19E-02
ADP-fossil*	MJ	3.21E+04	1.42E+03	9.62E+00	ND	ND	ND	ND	ND	ND	ND	4.72E+01	1.37E+02	1.69E+02	7.66E+00	-1.03E+04
WDP*	m^3	7.63E+02	6.10E+00	-3.30E+00	ND	ND	ND	ND	ND	ND	ND	1.23E-01	7.75E-01	3.12E+00	3.39E-01	-1.33E+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:
**CO_2 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	3.01E+03	1.65E+01	2.37E-01	ND	ND	ND	ND	ND	ND	ND	2.96E-01	1.93E+00	2.40E+01	7.16E-02	-1.27E+03
PERM	MJ	4.39E+02	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PERT	MJ	3.45E+03	1.65E+01	2.37E-01	ND	ND	ND	ND	ND	ND	ND	2.96E-01	1.93E+00	2.40E+01	7.16E-02	-1.27E+03
PENRE	MJ	3.21E+04	1.42E+03	9.62E+00	ND	ND	ND	ND	ND	ND	ND	4.72E+01	1.37E+02	1.69E+02	7.66E+00	-1.03E+04
PENRM	MJ	2.98E+01	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PENRT	MJ	3.21E+04	1.42E+03	9.62E+00	ND	ND	ND	ND	ND	ND	ND	4.72E+01	1.37E+02	1.69E+02	7.66E+00	-1.03E+04
SM	kg	3.93E+02	7.13E-01	4.86E-03	ND	ND	ND	ND	ND	ND	ND	1.95E-02	6.12E-02	3.05E-01	1.91E-03	4.30E+02
RSF	MJ	1.31E+01	4.98E-03	1.70E-04	ND	ND	ND	ND	ND	ND	ND	5.12E-05	7.94E-04	2.42E-02	3.98E-05	-1.04E-01
NRSF	MJ	3.24E-01	0.00E+00	0.00E+00	ND	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
FW	m^3	3.28E+03	1.49E-01	-7.67E-02	ND	ND	ND	ND	ND	ND	ND	3.02E-03	1.89E-02	8.12E-02	7.92E-03	-3.19E+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.	2.87E+03	1.10E+02	8.72E-01	ND	ND	ND	ND	ND	ND	ND	3.68E+00	9.97E+00	5.21E+01	3.20E-01	-1.01E+03

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	ND	ND	ND	ND	ND	ND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Material for recycling	kg	3.14E+01	8.00E-01	4.51E+00	ND	ND	ND	ND	ND	ND	ND	2.10E-04	1.57E-03	9.60E+02	8.30E-05	-3.44E-01
Materials for energy recovery	kg	1.08E-02	6.39E-05	7.80E-07	ND	ND	ND	ND	ND	ND	ND	6.70E-07	9.30E-06	3.75E-05	1.47E-07	-7.21E-03
Exported energy, electricity	MJ	7.86E+00	1.01E-01	3.37E-03	ND	ND	ND	ND	ND	ND	ND	2.23E-03	1.16E-02	8.21E-02	4.97E-04	-2.18E+00
Exported energy, thermal	MJ	1.19E+01	1.32E-01	1.25E-03	ND	ND	ND	ND	ND	ND	ND	1.05E-03	2.07E-02	2.32E-02	2.64E-04	-8.38E+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	9.13E+02	2.76E+00	2.91E-02	ND	ND	ND	ND	ND	ND	ND	5.29E-02	3.13E-01	1.78E+00	8.72E-03	-4.78E+02
Non-hazardous waste disposed	kg	1.19E+04	4.80E+01	5.63E+01	ND	ND	ND	ND	ND	ND	ND	7.71E-01	6.03E+00	7.16E+01	2.02E-01	7.01E+03
Radioactive waste disposed	kg	2.62E-02	2.31E-04	2.80E-06	ND	ND	ND	ND	ND	ND	ND	4.93E-06	2.73E-05	2.17E-04	1.12E-06	-5.63E-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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