ENVIRONMENTAL PRODUCT DECLARATION

as per *ISO 14025* and *EN 15804+A2*

Owner of the Declaration	voestalpine AG
Programme holder	Institut Bauen und Umwelt e.V. (IBU)
Publisher	Institut Bauen und Umwelt e.V. (IBU)
Declaration number	EPD-VOE-20220199-IBA1-EN
Issue date	07.09.2022
Valid to	06.09.2027

colofer® - Organic-coated steel strip

voestalpine Stahl GmbH

Institut Bauen und Umwelt e.V.

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ECO PLATFORM EPD VERIFIED

1. General Information

voestalpine Stahl GmbH

Programme holder
IBU – Institut Bauen und Umwelt e.V.
Hegelplatz 1
10117 Berlin
Germany

Declaration number
EPD-VOE-20220199-IBA1-EN

This declaration is based on the product category rules:
Structural steels, 30.11.2017
(PCR checked and approved by the SVR)

Issue date
07.09.2022

Valid to
06.09.2027

Dipl. Ing. Hans Peters
(chairman of Institut Bauen und Umwelt e.V.)

Dr. Alexander Röder
(Managing Director Institut Bauen und Umwelt e.V.))

Organic-coated steel strip

Owner of the declaration
voestalpine AG
voestalpine-Strasse 1
4020 Linz
Austria

Declared product / declared unit
1 ton of average organic-coated steel strip

Scope:
This EPD is based on a declared unit of 1 ton of average organic-coated steel strip produced at the production site in Linz.

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.
The EPD was created according to the specifications of *EN 15804+A2*. In the following, the standard will be simplified as *EN 15804*.

Verification

The standard *EN 15804* serves as the core PCR
Independent verification of the declaration and data according to *ISO 14025:2011*
☐ internally ☒ externally

Dr.-Ing. Andreas Ciroth
(Independent verifier)

2. Product

2.1 Product description/Product definition

The declared product is sold under the brand name colofer®. It consists of a metallic substrate (hot-dip galvanized steel strip) and an organic coating system, which is applied in a coil coating line. This allows special material properties to be achieved:
- High level of corrosion resistance
- Excellent formability
- Elegant look

Applicable national regulations regulate product use at any given site. In Austria, for example, the building regulations of individual provinces and the technical stipulations based on these regulations are applicable.

2.2 Application

Typical areas of application for colofer®:
- Household appliance industry
- Building systems engineering
- Roof, cladding, drainage
- Heating, ventilation, air conditioning

2.3 Technical Data

The data listed in the declaration of performance are authoritative:

Technical data

Name	Value	Unit
Thickness	0.4 to 2.5	mm
Surface weight	3.0 to 17.7	kg/m²
Coating thickness per side	10 to 65	µm

Performance values of the product according to the declaration of performance in relation to essential characteristics in accordance with the following norms:

Product standard:
DIN EN 10169:2022-06, Continuously organic coated (coil coated) steel flat products - Technical delivery conditions.

End product standards:
DIN EN 508-1:2022-01, Roofing and cladding products from metal sheet - Specification for self-supporting products of steel, aluminium or stainless steel sheet - Part 1: Steel.
DIN EN 505:2013-06, Part 1, Roofing products from metal sheet - Specification for fully supported roofing products of steel sheet.
DIN EN 14782:2006-03, Self-supporting metal sheet for roofing, external cladding and internal lining - Product specification and requirements.

Approval standard:
DIN 55634:2018-03, Paints, varnishes and coatings - Corrosion protection of supporting thin-walled building components made of steel.

Application standards:
ÖNORM B 3521-1:2012-08-01, Design and construction of roofings and wall coverings of metal - Plumbers' work - Part 1: Workmanlike. *DIN EN 1090-4:2020-06, Execution of steel structures and aluminium structures - Part 4: Technical requirements for cold-formed structural steel elements and cold-formed structures for roof, ceiling, floor and wall applications*.

The declared colofer® product pursuant to *EN 10169* does not fall within the scope of Regulation (EU) No. 305/2011 EU Construction Products Regulation (CPR). The products do not feature a CE marking for this reason.

Respective national regulations shall apply to the use of the products.

2.4 Delivery status
colofer® is supplied in coils with a strip width ranging between 900 and 1740 mm. The steel strip thickness ranges between 0.4 and 2.5 mm, depending on the intended application and customer specifications.

2.5 Base materials/Ancillary materials
The starting product of colofer® is a cold-rolled, hot-dip galvanized steel strip produced on site at voestalpine Stahl GmbH. The basic material is produced of crude steel comprising roughly 75 % pig iron and 25 % scrap.

Auxiliary materials/additives
- Zinc coating: > 99 % Zn
- corrender: Zinc-magnesium coating: 96 % Zn; 1.5 % Mg; 2.5 % Al

The product for authorization contains substances on the ECHA list of substances of very high concern (SVHC) (14 July 2021) above 0.1 mass percent: **No.**

The product contains further CMR substances of category 1A or 1B that not in the candidate list, above 0.1 mass percent in at least one sub-product: **No.**

Biocides have been added to the construction product, or the product has been treated with biocides (a treated product pursuant to the Biocidal Product Regulation (EU) No. 528/2012): **No.**

2.6 Manufacture
The starting material for the production of colofer® is a steel slab produced using the primary route (blast furnace, LD steelmaking plant). The molten crude steel is cast into slabs using a continuous casting method. The cast slabs are reheated in pusher-type or walking beam furnaces and rolled into steel strips in several rolling steps. After the hot-dip galvanizing process (metallic coating with zinc or zinc-magnesium), the organic coating is applied in a coil coating line.

2.7 Environment and health during manufacturing
voestalpine Stahl GmbH is certified pursuant to *EMAS 2009*, *ISO 9001* und *ISO 14001*. In compliance with EMAS provisions, voestalpine continually publishes environment-related facts and figures pertaining to the production site. Investments are being made continually in the expansion of environmental protection measures at the Linz site in an effort to reduce air and water emissions to a minimum. All production systems are inspected on a regular basis as part of environmental audits in accordance with the state of the art.

2.8 Product processing/Installation
colofer® is further processed using standard sheet metal working methods such as edging, roll forming, profiling, deep drawing etc. Emissions or other harmful effects are not produced during the processing of the declared product.

2.9 Packaging
The declared product is supplied in the form of coils. Packaging consists of paper (coated), steel straps (circumferential and axle hole straps) and wooden frames and varies depending on the type of transport. All packaging can be recycled in its entirety.

2.10 Condition of use
The declared product is a high-quality steel strip that has been galvanized and organic-coated as a corrosion-resistant, long-life material. Material changes are not expected in the intended application.

2.11 Environment and health during use
No adverse effects are expected on human health or the environment during use, nor do any harmful emissions arise from the declared product.

2.12 Reference service life
The referenced useful life depends on the respective application and generally lasts between 15 and 50 years.

2.13 Extraordinary effects

Fire
Not relevant.

Fire protection

Name	Value
Building material class	A1
Burning droplets	Not relevant
Smoke gas development	Not relevant

Water
No negative effects are to be expected on the environment under the influence of water.

Mechanical destruction
Unforeseeable mechanical effects on the declared product would have no negative environmental impact because of the plasticity of steel.

2.14 Re-use phase
colofer® can either be reused, introduced to a recycling process or reintroduced to the steelmaking industry as a valuable secondary raw material.

2.15 Disposal
The declared product can be entirely recycled. The waste code is in accordance with European Waste Catalog (EWC): 17 04 05. The type of waste is to be equated with waste catalog code 35103 pursuant to

the Waste Catalog Ordinance applicable on a national level.

2.16 Further information

Please find more information about the product on our web site at https://www.voestalpine.com/colofer.

3. LCA: Calculation rules

3.1 Declared Unit

This environmental product declaration refers to a declared unit of 1 ton of organic-coated steel strip.

Declared unit

Name	Value	Unit
Declared unit	1	t
Conversion factor to 1 kg	0.001	-
Grammage	5.5	kg/m²

For the calculation of the declared average, all product variations produced were included in the form of an annual average. Input and production quantities for the entire calendar year 2019 were taken into account. The calculated results can thus be considered representative for the entire product portfolio organic-coated steel strip of voestalpine Stahl GmbH. The reference thickness, the average zinc layer and organic coating are also based on a weighting by quantitiy.

3.2 System boundary

The life cycle assessment of average organic-coated steel strip refers to a cradle-to-gate analysis with modules (A1-A3 + C +D). Subsequent life cycle phases are part of the analysis:

Module A1-A3 | Production stage
The production stage includes the upstream burdens of purchased raw materials (coal, iron ore, pellets etc.), their transports and the manufacturing at the production site in Linz. Material and energy flows for the sinter plant, the coking plant, the blast furnaces, the steelworks, the hot strip mill, pickling, cold rolling as well as hot-dip galvanizing and organic coating are considered. Electricity is provided at Linz from a power station where process gases are used as fuel. Since more energy is used than is supplied by this company-owned power station, natural gas and electricity is additionally procured from Austrian networks. Module A1-A3 also includes the production of the product packaging.

Module C1 | Deconstruction and demolition
It is assumed that the product is not connected with other materials and can therefore be dismantled. Associated efforts are negligible, no environmental impacts from the deconstruction of the products are declared.

Module C2 | Transport to disposal
The transport to the disposal of the material is estimated declaring a 50 km radius to the waste processing.

Module C3 | Waste processing
Product flows that reach Module D for recycling leave the product system in C3. Environmental impacts resulting from the grinding and sorting of steel scrap are not included due to the negligible expected environmental impact.

Module C4 | Landfilling
Module C4 declares the environmental impacts incurred by landfilling (5 % of the product).

Module D | Credits and loads beyond the system boundary
The potential for substituting primary steel with a recycling scenario (95 % of the product) is outlined in Module D.

3.3 Estimates and assumptions

All assumptions are verified through detailed documentation and correspond to the best possible representation of reality based on the available data. Regional applicability of the used background data refers to average data under European or German conditions taken from the *GaBi*-database. German data were used for the Austrian market whenever European or Austrian average data were not available.

The composition of the galvanizing and the organic coating of the steel strip reflects the majority of the systems used and can thus be considered representative. Due to the large number of coating systems used, simplifying assumptions were made.

3.4 Cut-off criteria

All inputs and outputs for which data are available are included in the LCA model. Data gaps are filled with conservative assumptions from average data (when available) or with generic data and are documented accordingly. Only data with a contribution of less than 1 % were cut off. Ignoring such data is justified based on the irrelevance of the expected effect. Processes, materials, or emissions known to make a significant contribution to the environmental effects of the products under examination have not been neglected. Data were collected from the models and recommendations developed by *worldsteel 2017* and tested using available comparable values. It is assumed that the data have been completely recorded and the overall total of ignored input flows do not amount to more than 5 % of total energy and mass flows. Environmental impacts of machines, plant and infrastructure were not included.

3.5 Background data

This study uses generic background data for the evaluation of upstream environmental impacts from *GaBi*-database 2021.1 and is modelled in *GaBi*-software version 10.

3.6 Data quality

The foreground data collected at voestalpine Stahl GmbH are based on the quantities used and volumes produced annually. All process data were collected by voestalpine in the course of reporting to official agencies. Data on material and energy use originate from material-specific throughput measurements of various processes as well as from controlling. Data were collected in compliance with *worldsteel 2017* provisions and were subjected to a supplementary

plausibility check using material flow analyses of individual process steps. The technological, geographical and time-related representativeness of the data base was kept in mind when selecting background data. Whenever specific data were missing, either generic datasets or representative average data were used instead. The implemented *GaBi* background datasets are not more than ten years old.

3.7 Period under review

Foreground data were collected in the 2019 production year, and the data are based on the volumes produced on an annual basis.

3.8 Allocation

The primary data are allocated using the partitioning approach developed by *worldsteel 2014* for calculating life cycle inventories of coproducts in steel production, which is in line with the provisions of *EN 15804*. The so-called partitioning approach provides for the allocation of environmental effects on the steelmaking process and the emerging byproducts based on physical relations. Material-inherent flow properties are thus taken into account.

The pickling byproducts iron sulphate and iron oxide were cut off as a result of their low contribution to company revenue. Economic allocation is not considered to be expedient because the byproducts and co-products are not directly tradable goods. Furthermore, long-term contracts for the sale of the byproducts exist, and the negotiated prices are therefore not subject to market dynamics.

3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to *EN 15804* and the building context, respectively the product-specific characteristics of performance, are taken into account.

The *GaBi* background database was used to calculate the LCA (*GaBi* 10; 2021.1).

4. LCA: Scenarios and additional technical information

Characteristic product properties
Information on biogenic Carbon
The declared product does not contain any biogenic carbon.

Installation in building (A5)
The end-of-life of the packaging materials is not declared in Module A5.

Name	Value	Unit
Packaging (Paper)	0.0012	kg
Packaging (Steel strips)	0.0002	kg

The end-of-life scenario used in this LCA study is based on the following assumptions and thus complies with the specifications published in *ökobaudat 2021*:

End-of-life (C1-C4)

Name	Value	Unit
Collected separately (Steel)	1000	kg
Recycling 95 %	950	kg
Landfilling 5 %	50	kg

Re-Use, recovery and recycling potential (D), relevant scenario information

Name	Value	Unit
Net flow of steel scrap	813	kg

This scenario contains a recycling rate of 95 %. Since voestalpine externally purchases scrap for steel production, this is offset against the steel scrap for recycling (net flow).

5. LCA: Results

The following table contains the LCA results for a declared unit of 1 ton organic-coated steel strip.

Disclaimer:
EP-freshwater: This indicator has been calculated as “kg P eq” as required in the characterization model (EUTREND model, Struijs et al., 2009b, as implemented in ReCiPe; http://eplca.jrc.ec.europa.eu/LCDN/developerEF.xhtml).

DESCRIPTION OF THE SYSTEM BOUNDARY (X = INCLUDED IN LCA; ND = MODULE OR INDICATOR NOT DECLARED; MNR = MODULE NOT RELEVANT)

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARIES
Raw material supply	Transport	Manufacturing	Transport from the gate to the 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	ND	ND	ND	MNR	MNR	MNR	ND	ND	X	X	X	X	X

RESULTS OF THE LCA - ENVIRONMENTAL IMPACT according to EN 15804+A2: 1 t organic-coated steel strip

Core Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Global warming potential - total	[kg CO_2-Eq.]	2.45E+3	0.00E+0	3.02E+0	0.00E+0	2.42E+0	-1.38E+3
Global warming potential - fossil fuels	[kg CO_2-Eq.]	2.45E+3	0.00E+0	3.00E+0	0.00E+0	2.44E+0	-1.38E+3
Global warming potential - biogenic	[kg CO_2-Eq.]	6.16E+0	0.00E+0	-3.56E-3	0.00E+0	-2.50E-2	-8.93E-1
GWP from land use and land use change	[kg CO_2-Eq.]	8.38E-1	0.00E+0	2.44E-2	0.00E+0	2.44E-3	1.99E-1
Depletion potential of the stratospheric ozone layer	[kg CFC11-Eq.]	6.16E-11	0.00E+0	5.90E-16	0.00E+0	5.77E-15	-2.30E-12
Acidification potential, accumulated exceedance	[mol H^+-Eq.]	5.47E+0	0.00E+0	9.92E-3	0.00E+0	7.78E-3	-2.47E+0
Eutrophication, fraction of nutrients reaching freshwater end compartment	[kg P-Eq.]	3.03E-3	0.00E+0	8.88E-6	0.00E+0	1.86E-6	-2.82E-4
Eutrophication, fraction of nutrients reaching marine end compartment	[kg N-Eq.]	1.27E+0	0.00E+0	4.55E-3	0.00E+0	1.93E-3	-3.69E-1
Eutrophication, accumulated exceedance	[mol N-Eq.]	1.38E+1	0.00E+0	5.08E-2	0.00E+0	2.12E-2	-3.60E+0
Formation potential of tropospheric ozone photochemical oxidants	[kg NMVOC-Eq.]	4.26E+0	0.00E+0	8.94E-3	0.00E+0	6.08E-3	-1.89E+0
Abiotic depletion potential for non-fossil resources	[kg Sb-Eq.]	8.91E-2	0.00E+0	2.65E-7	0.00E+0	1.68E-7	-3.00E-3
Abiotic depletion potential for fossil resources	[MJ]	2.34E+4	0.00E+0	3.98E+1	0.00E+0	3.56E+1	-1.20E+4
Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	[m^3 world-Eq deprived]	9.96E+1	0.00E+0	2.77E-2	0.00E+0	-2.89E-2	-2.70E+2

RESULTS OF THE LCA - INDICATORS TO DESCRIBE RESOURCE USE according to EN 15804+A2: 1 t organic-coated steel strip

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Renewable primary energy as energy carrier	[MJ]	1.63E+3	0.00E+0	2.29E+0	0.00E+0	2.57E+0	1.10E+3
Renewable primary energy resources as material utilization	[MJ]	1.68E+1	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total use of renewable primary energy resources	[MJ]	1.64E+3	0.00E+0	2.29E+0	0.00E+0	2.57E+0	1.10E+3
Non-renewable primary energy as energy carrier	[MJ]	2.35E+4	0.00E+0	4.00E+1	0.00E+0	3.56E+1	-1.20E+4
Non-renewable primary energy as material utilization	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Total use of non-renewable primary energy resources	[MJ]	2.35E+4	0.00E+0	4.00E+1	0.00E+0	3.56E+1	-1.20E+4
Use of secondary material	[kg]	1.38E+2	0.00E+0	0.00E+0	0.00E+0	0.00E+0	8.13E+2
Use of renewable secondary fuels	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of non-renewable secondary fuels	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Use of net fresh water	[m^3]	6.18E+0	0.00E+0	2.62E-3	0.00E+0	3.67E-4	-6.07E+0

RESULTS OF THE LCA – WASTE CATEGORIES AND OUTPUT FLOWS according to EN 15804+A2: 1 t organic-coated steel strip

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Hazardous waste disposed	[kg]	6.83E-6	0.00E+0	2.11E-9	0.00E+0	6.30E-9	3.35E-6
Non-hazardous waste disposed	[kg]	3.04E+1	0.00E+0	6.27E-3	0.00E+0	5.01E+1	1.44E+2
Radioactive waste disposed	[kg]	2.61E-1	0.00E+0	7.25E-5	0.00E+0	4.05E-4	4.34E-4
Components for re-use	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Materials for recycling	[kg]	0.00E+0	0.00E+0	0.00E+0	9.50E+2	0.00E+0	0.00E+0
Materials for energy recovery	[kg]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Exported electrical energy	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0
Exported thermal energy	[MJ]	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0	0.00E+0

RESULTS OF THE LCA – additional impact categories according to EN 15804+A2-optional: 1 t organic-coated steel strip

Indicator	Unit	A1-A3	C1	C2	C3	C4	D
Potential incidence of disease due to PM emissions	[Disease Incidence]	ND	ND	ND	ND	ND	ND
Potential Human exposure efficiency relative to U235	[kBq U235-Eq.]	ND	ND	ND	ND	ND	ND
Potential comparative toxic unit for ecosystems	[CTUe]	ND	ND	ND	ND	ND	ND
Potential comparative toxic unit for humans - cancerogenic	[CTUh]	ND	ND	ND	ND	ND	ND
Potential comparative toxic unit for humans - not cancerogenic	[CTUh]	ND	ND	ND	ND	ND	ND
Potential soil quality index	[-]	ND	ND	ND	ND	ND	ND

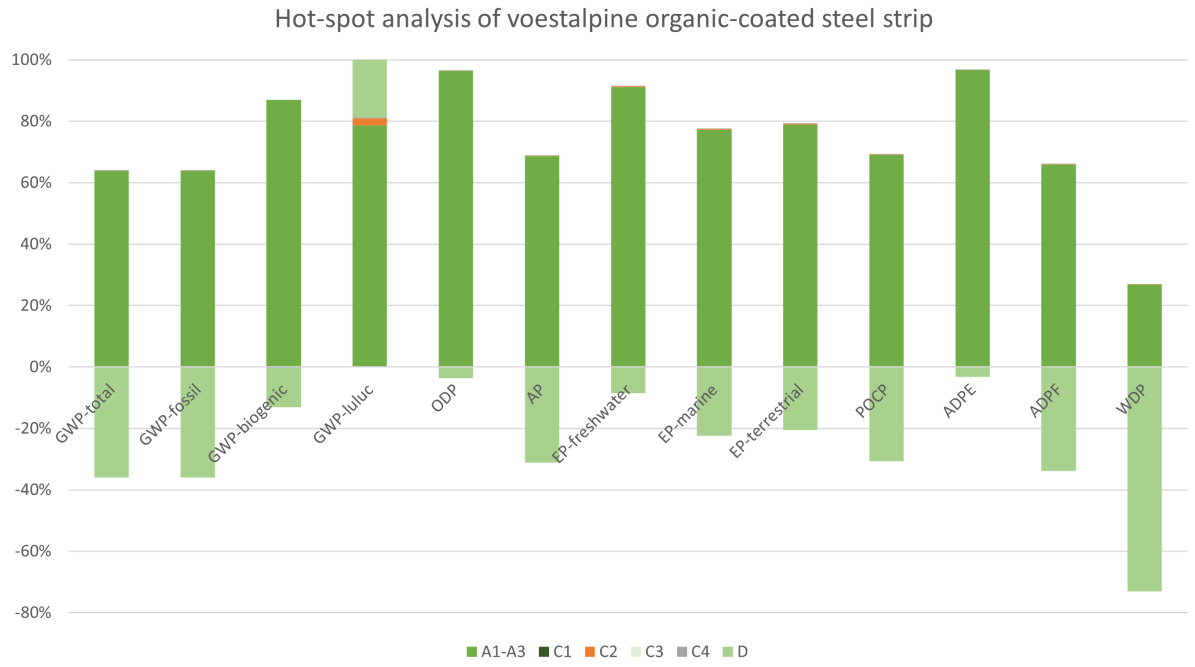
The additional and optional impact categories according to *EN 15804+A2* are not declared, as this is not required according to *PCR Part A*.

Disclaimer 1 – for the indicator potential human exposure efficiency relative to U235: 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 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 – for the indicators abiotic depletion potential for non-fossil resources, abiotic depletion potential for fossil resources, water (user) deprivation potential, deprivation-weighted water consumption, eutrophication - fraction of nutrients reaching freshwater end compartment, potential comparative toxic unit for humans - cancerogenic, potential comparative toxic unit for humans - not cancerogenic, potential soil quality index: 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.

6. LCA: Interpretation

The following interpretation contains a summary of the LCA results referenced to a declared unit of 1 ton organic-coated steel strip.



A comparison of the individual lifecycle phases results in a clear dominance of the production phase (Modules A1-A3). The environmental effects in the production phase are mainly dominated by the direct process emissions of steel production and the supply chain of purchased raw materials and energy carriers.

As a result of product recyclability, the material removed at the end of life can substitute primary steel. Module D shows the recycling potential of steel at the end of its product life. This results in credits from the substitution of primary steel.

The environmental impact of the transport of the products to recycling (C2) as well as landfilling of the losses at the end of life (C4) represents a minor contribution to the overall environmental impact of the product.

In summary, raw material input and energy carriers required in the production phase as well as direct

emissions at the site can be identified as important factors in the environmental impact of organic-coated steel strip. The greenhouse gases directly emitted from the processes at the Linz production site, especially from the blast furnaces and the energetic treatment of the metallurgical gases in the network, contribute to a large share to potential global warming. In the environmental profile of the organic-coating process, the production of the coating-system and solvents as well as direct emissions from the natural gas input and the regenerative thermal oxidation play a major role.

Organic-coating contributes about 4% to the carbon footprint (GWP), 9% to the potential acidification (AP) and respectively 18% to marine and terrestrial eutrophication (EP-marine & EP-terrestrial), with the upstream supply chain of the coating itself and direct emissions from the coating process as most important drivers. The abiotic depletion potential for non-fossil resources (ADPE) is almost exclusively (98%) depending on the zinc layer.

In the declared average of this EPD all produced grades were included in the form of a representative average. The analysis of different specifications of organic-coated steel strips identifies a variation of the product-related carbon footprint of 2 %. For potential acidification, eutrophication and formation potential of tropospheric ozone photochemical oxidants, this interval amounts to up to ±1-13 %.

Due to the homogeneous structure of the products, the environmental impact of the products correlates directly with their mass. This implies a slight imprecision for the galvanization and organic-coating as these layers are not scalable linearly but surface-related and are dependent on the variation of their thickness on the respective product.

The results of the previous EPD (EPD-VOE-20190048-IBC1-DE) are not directly comparable with the present updated version due to the update of the underlying methodology according to *EN 15804+A2*.

7. Requisite evidence

Not relevant for this EPD.

8. References

Standards

DIN 55634
DIN 55634:2018-03, Paints, varnishes and coatings - Corrosion protection of supporting thin-walled building components made of steel.

EN 505
DIN EN 505:2013-06, Roofing products from metal sheet - Specification for fully supported roofing products of steel sheet.

EN 508
DIN EN 508-1:2022-01, Roofing and cladding products from metal sheet - Specification for self-supporting products of steel, aluminium or stainless steel sheet - Part 1: Steel.

EN 1090-4
DIN EN 1090-4:2020-06, Execution of steel structures and aluminium structures - Part 4: Technical requirements for cold-formed structural steel elements and cold-formed structures for roof, ceiling, floor and wall applications.

EN 10169
DIN EN 10169:2022-06, Continuously organic coated (coil coated) steel flat products - Technical delivery conditions.

EN 14782
DIN EN 14782:2006-03, Self-supporting metal sheet for roofing, external cladding and internal lining - Product specification and requirements.

EN 15804
EN 15804:201204+ A2:2019, Sustainability of construction works - Environmental Product Declarations - Core rules for the product category of construction products.

ISO 9001
DIN EN ISO 9001:2015, Quality management systems – Requirements.

ISO 14001
DIN EN ISO 14001:2015, Environmental management systems – Requirements with guidance for use.

ISO 14025
DIN EN ISO 14025:2011-10, Environmental labels and declarations - Type III environmental declarations - Principles and procedures.

ISO 14044
DIN EN ISO 14044:2006, Environmental management – Life cycle assessment – Requirements and guidelines.

ÖNORM 3521-1
ÖNORM B 3521-1:2012-08-01, Design and construction of roofings and wall coverings of metal - Plumbers' work - Part 1: Workmanlike.

Further references

Candidate List
Candidate List of Substances of Very High Concern (ECHA Candidate List) of 14.07.2021, published in accordance with Article 59 (10) of the REACH Regulation Helsinki: European Chemicals Agency.

EMAS 2009
Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a

community ecomanagement and audit scheme (EMAS).

GaBi
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