

METEHE

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ENVIRONMENTAL PRODUCT DECLARATION

ORGANIC COATED STEEL

IN ACCORDANCE WITH EN 15804 AND ISO 14025

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Organic coated steel



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Name of the product:	Organic coated steel
Declaration number:	RTS_486_26
Registration number:	
Issue date:	27.5.2026
Valid to:	27.5.2031
Scope of the declaration:	This environmental product declaration covers the environmental impacts of average organic coated steel products. The declaration has been prepared in accordance with EN 15804:2019 and ISO 14025 standards and the additional requirements stated in RTS PCR (Finnish version, 121124). This declaration covers the life cycle stages from cradle-to-gate with options (A1-A3, A4-A5), modules C1-C4 and module D.
	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  Jukka Seppänen RTS EPD Committee Secretary </div> <div style="text-align: center;">  Laura Apilo Managing Director </div> </div>

Verified according to the requirements of EN 15804:2019 (product group rules)

Independent verification of the declaration and data, according to ISO14025:2010 is carried out by

Internal

External

Third party verifier:

Valtteri Kainila
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General information

Owner of the declaration



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Product name

Organic coated steel

Manufacturer

Produced in Finland: Lappeenranta and Järvenpää, Metehe Oy

Additional information

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Product Category Rules and the scope of the declaration

The declaration has been prepared in accordance with EN 15804:2019+A2 and ISO 14025 standards and the additional requirements stated in RTS PCR version 121124 (Finnish version, 121124). EPD of construction products may not be comparable if they do not comply with EN15804 and seen in a building context. Year 2024 is the reference year for primary data used in calculation.

Author of the life cycle assessment and declaration

Heli Kumpulainen at Etteplan Finland Oy, Askonkatu 9E, 15100 Lahti.

Verification

The declaration was verified by Valtteri Kainila from Ramboll Finland Oy according to abovementioned standards and PCR rules.

Third party verification on 21.05.2026. Verification is valid 21.05.2026-20.05.2031.

Declaration issue date and validity

Declaration issue date 27.5.2026. The declaration is valid 5 years, 27.5.2026-27.5.2031.



Metehe headquarters and main factory in Lappeenranta, Finland

Metehe Oy in brief

Metehe Oy is a Finnish family-owned company founded in 1998, with over 40 years of experience in the manufacturing of high-quality steel roofing products and the processing of thin steel sheets. Metehe Oy permanently employs approximately 41 professionals, with headquarters in Lappeenranta, Finland.

Our main raw material, steel, has a technical product warranty up to 50 years and at the end of its life cycle, steel is 100% recyclable. Our steel is utilized by consumers, roofing installers and construction companies, as well as sheet metal workshops, installation companies and steel thin-sheet processors in various applications. We also offer practical solutions for designers and for industrial needs.

Metehe Oy is committed to sustainability across climate action, value chain responsibility, people and governance. We aim to reduce Scope 1 and 2 emissions by 50% by 2035 and achieve carbon neutrality across our value chain by 2050. Long-lasting, fully recyclable products, improved waste recycling and the use of low-emission materials support circular economy goals. Metehe promotes transparency, ethical business practices, human rights, occupational safety and responsible supply chain management, while pursuing continuous improvement and profitable, sustainable growth.

The products we produce are within the scope of the harmonized product standards SFS-EN 14782 and 14783, which apply to metal roofing and cladding products. The CE marking is proof that our products have been manufactured in the EU according to valid regulations, in other words they meet the operating requirements intended for the products and the procedures specified by the standard have been carried out.

Sustainability at Metehe

Sustainability at Metehe is founded on good governance and on three pillars: climate and nature, value chain and social. We want to be actively involved in addressing societal challenges related to climate change mitigation and sustainable development. In our own operations, we aim to promote the sustainable use of natural resources by preventing waste generation and improving material recycling. We monitor emissions and environmental impacts arising from our operations and aim to minimize our environmental footprint.

Our main raw material, steel, is a durable material with a technical product warranty of up to 50 years. At the end of its life cycle, steel is 100% recyclable. Our main raw material suppliers are committed to sustainable development in their own operations and have set carbon neutrality targets for 2045 and 2050.

We strive to minimize the amount of waste generated in our production processes and ensure that all production waste is recycled appropriately. We actively seek new opportunities to replace production inputs with more environmentally friendly alternatives.

CLIMATE AND NATURE

We are reducing emissions throughout our value chain

- Short-term Scope 1 and 2 emission reductions of 50% by 2035
- Value chain emissions reduced to carbon neutrality by 2050
- Actively seeking lower-emission and more environmentally friendly raw materials and production inputs for our operations

Long-lasting products

- Our products have a long service life of up to 50 years
- At the end of their life cycle, they are 100% recyclable

Promoting the circular economy

- We are constantly improving waste recycling efficiency

VALUE CHAIN

Our customers' needs are at the core of our operations

- We support our customers in making informed choices
- Our operations are transparent, and we provide reliable information about our products and operating practices. We act as agreed and keep our promises.

Ensuring supply chain responsibility

- We are committed to Metehe Oy's ethical business principles and sustainability principles and require our suppliers to comply with the same standards.

PEOPLE

- We respect the human dignity, privacy and rights of every individual and do not tolerate any form of discrimination, threats, harassment or bullying in the workplace
- We treat each other fairly and equally
- We respect our employees' freedom of association and maintain continuous dialogue with employee representatives
- Our occupational safety goal is to ensure a safe workplace for all employees, and safety guidelines are integrated into daily operation
- We do not accept child labor, forced labor, human trafficking or any other human rights violations in our operations or supply chain

GOOD GOVERNANCE

- We are committed to complying with Metehe Oy's Code of Conduct
- We ensure that all employees are familiar with and adhere to the company's ethical guidelines
- We strengthen sustainability competence throughout the organization
- We aim for profitable growth and to provide customers with high-quality, sustainable products, while continuously developing and improving our operations.

Product information

This declaration is made for organic coated steel products with thickness of 0.45 - 2.0 mm with 25 - 50 µm organic coating. 1 ton, with density of 7 850 kg/m³.

APPLICATION

Organic coated steels are suitable for roof, facade, perforated sheet metal and coil products for various end applications in construction, building and industrial manufacturing.

Further information can be found at www.metehe.fi.

COATINGS

Metehe's coating selection has a suitable option for all applications. The most common applications of organic coated steel sheet metal are the roofs, walls and facades of various buildings – the material must withstand UV radiation, heat, ice and snow. The features of the product to be produced are affected by whether the paint coat is smooth or structured, semi-glossy or matt.

PUR

Polyurethane (Colorcoat® SDP 50) is a semi-glossy coating with a structured surface, and which is suitable for demanding indoor and outdoor use. It has a warranty period of 25 years. The coating is highly resistant to UV radiation, scratches and corrosion. PUR is particularly suitable as a roofing material, as both profile sheets and seamed roofing.

PUR MATT

Polyurethane matt (Colorcoat® SDP 50 Matt) is a non-shiny coating with a structured surface, and which is suitable for demanding indoor and outdoor use. It has a warranty period of 25 years. The coating is highly resistant to UV radiation, scratches and corrosion. PUR Matt is particularly suitable as a roofing material, as both profile sheets and seamed roofing.

HC25

Hard Coat 25 (Colorcoat® PE 25 HC) is an affordable, silky coating with a slightly structured surface and which is suitable for indoor and outdoor use. It has a warranty period of 15 years. The coating has good resistance against UV radiation, scratches and corrosion. HC25 is suitable for less demanding sites, such as the roofs of warehouses and holiday homes.

PE

Polyester (Colorcoat® PE 25) is an affordable, semi-glossy warranty coating with a smooth surface and which is suitable for indoor and outdoor use. It has a warranty period of 10 years. The coating is moderately resistant to UV radiation, scratches and corrosion. PE is suitable for less demanding sites, such as the roofs of warehouses and holiday homes.

PVDF+ MATT

PVDF+ Matt (Colorcoat® PVDF 35 Matt) is a dim warranty coating with a matt surface, and which is suitable for demanding indoor and outdoor use. It has a warranty period of 20 years. The coating is highly resistant to UV radiation and corrosion. The coating holds its color very well and its features make it particularly suited for the demanding cladding of buildings, as well as for various element structures.

PVDF+

PVDF+ (Colorcoat® PVDF 35) is a semi-glossy warranty coating with a smooth surface, and which is suitable for demanding indoor and outdoor use. It has a warranty period of 20 years. The coating is highly resistant to UV radiation and corrosion. The coating holds its color very well and it is easy to keep clean, which is why its features make it particularly suited for the demanding cladding of buildings, as well as for various element structures.

PUR35

PUR35 (Colorcoat® SDP 35) is a semi-glossy warranty coating with a smooth surface, and which is suitable for demanding indoor and outdoor use. It has a warranty period of 15 years. The coating is highly resistant to UV radiation and corrosion. The coating holds its color very well and it is easy to keep clean, which is why its features make it particularly suited for the demanding cladding of buildings, as well as for various element structures.

TECHNICAL INFORMATION

Organic coated steels are made in conformity with EN 10169:2010 + A1:2012 "Continuously organic coated (coil coated) steel flat products. Technical delivery conditions (+A1:2012) (Withdrawn)."

The products we produce are within the scope of the harmonized product standards SFS-EN 14782 and 14783. When you select a CE-marked product from our selection, it will certainly meet the existing regulation, and it can be reused according to the Building Products Act. By affixing CE marking to a product, the manufacturer indicates that the product conforms to all relevant legislative requirements, in particular to health, safety and environmental protection requirements.



Metehe Concertto 600 and Metehe Concertto 1200 manufactured from organic coated steel

KEY ENVIRONMENTAL INFORMATION

Key information of environmental information reported per kilogram of organic coated steel									
Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential – total (GWP-total)	kg CO ₂ eq./kg	2.58E+00	1.79E-02	4.05E-02	6.50E-04	1.35E-02	3.19E-01	4.26E-04	-1.66E+00
Depletion of abiotic resources – minerals and metals (ADP-M)	kg Sb eq./kg	6.85E-05	1.20E-09	1.00E-10	4.30E-11	9.04E-10	6.56E-08	2.89E-11	-7.24E-08
Depletion of abiotic resources – fossil fuels (ADP-F)	MJ net calorific value/kg	2.87E+01	2.32E-01	1.92E-02	8.28E-03	1.74E-01	4.04E+00	6.95E-03	-1.41E+01
Water use (WDP)	m ³ world eq. deprived/kg	1.36E+00	8.28E-05	3.78E-03	2.96E-06	6.22E-05	1.12E-02	4.97E-05	-1.99E-02
Biogenic carbon content in product	kg C/kg	0	NA	NA	NA	NA	NA	NA	NA
Use of secondary material	kg/kg	1.02E-04	NA	NA	NA	NA	NA	NA	8.29E-04

PRODUCT COMPOSITION

Product raw material composition			
Product components	Unit	Organic coated steel	Recycled materials weight-%
Organic coated steel	t	1	10.2%
Total	t	1	
Biogenic carbon content in product	Kg C	0	

Packaging material composition		
Packaging materials	Unit	Organic coated steel
Cardboard	kg/t	3.72
Polyethylene wrap	kg/t	3.79
Bed timber	kg/t	10.76
Polyester band	kg/t	0.48
Expanded polystyrene	kg/t	0.04
Bitumen	kg/t	0.05
Steel wire	kg/t	0.19
Total	kg/t	19.03
Biogenic carbon content in packaging	kg/t	7.14
	wt. %	37.52 %

Product raw material main composition		
Raw-material category	Organic coated steel, amount mass-%	Material origin
Metals	100%	Europe (FR, NL)
Minerals	-	
Fossil materials	-	
Bio-based materials	-	
Total	100%	

Scope of the life cycle assessment

The results of environmental indicators stated in this declaration are average values for organic coated steel products manufactured by Metehe at factories located in Lappeenranta (Finland) and Järvenpää (Finland). The results have been calculated based on weighted average of yearly production volume. The deviation in the environmental impact values related to the variation of factories and products GWP-total indicator is not higher than 10%.

SYSTEM BOUNDARY

The type of this declaration is cradle to gate with options, module A4-A5, modules C1-C4 and module D. Covered modules are marked with an X in the table below. MND=Module not declared

Manufacturing and packaging (A1-A3)

- Raw material supply (A1) includes raw material extraction and raw material processing to semi-finished product
- Raw material transport (A2) from suppliers to manufacturing
- Manufacturing (A3) includes direct emissions from the site and the production of energy, fuels, waste treatment and packaging materials

Transport and installation (A4-A5)

- Transport (A4) to construction includes transport to the site
- Construction (A5) includes installation of the product and waste treatment of used packaging materials

Product use and maintenance (B1-B7)

This EPD does not cover the use phase. Air, soil and water impacts during the use phase have not been studied.

Product end of life (C1-C4, D)

- End of life stage (C1-C4) includes deconstruction (C1), transport of product to end of life (C2), end of life waste processing for recycling and energy recovery(C3) and the disposal of materials (C4)
- Supplementary information beyond the life cycle (D) includes reuse, recycling and recovery potential outside the system boundaries from material and energy substitution.

Product stage			Construction stage		Use stage							End of life stage				Supplementary information beyond the lifecycle		
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D	D	D
☒	☒	☒	☒	☒	MND	MND	MND	MND	MND	MND	MND	☒	☒	☒	☒	☒	☒	☒
Raw material supply	Transport	Manufacturing	Transport	Construction	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	Deconstruction demolition	Transport	Waste processing	Disposal	Reuse	Recovery	Recycling

	Mandatory modules
	Mandatory in accordance with the provision of section 5.2 of the RTS EDP protocol
	Optional modules based on scenarios

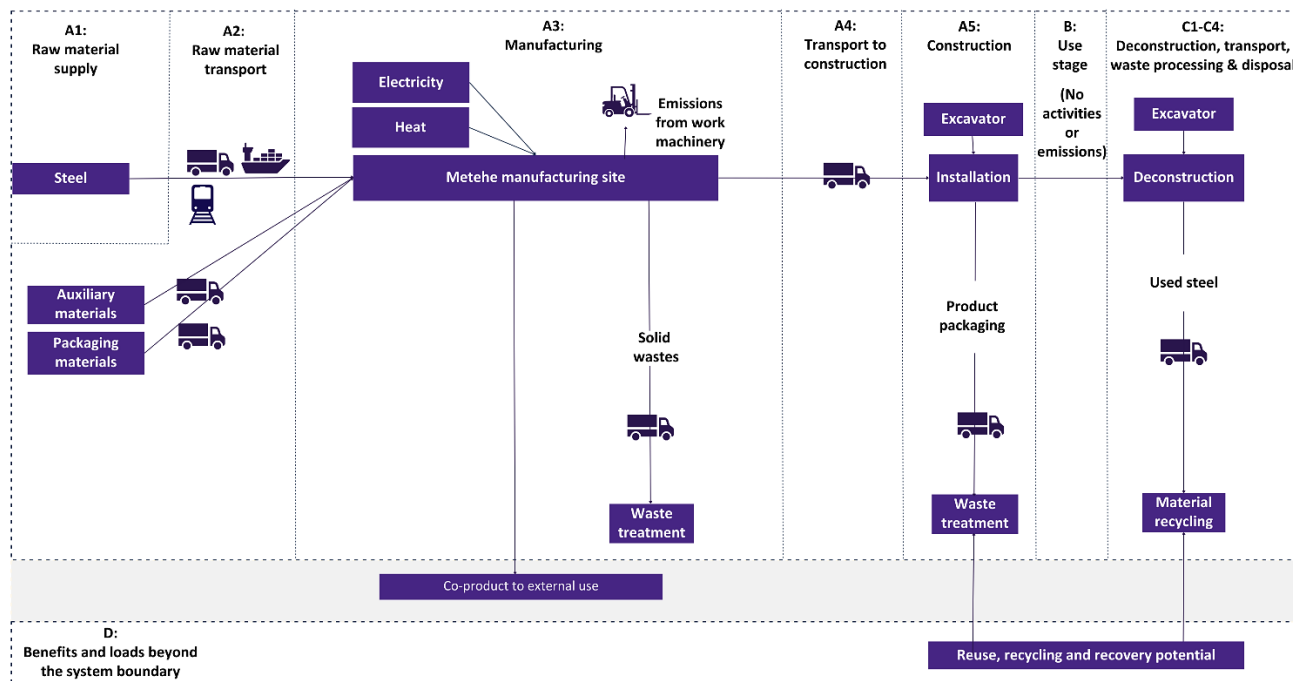
DECLARED UNIT

The declared unit is 1 ton of organic coated steel. The conversion factor from kg to m³ is shown in the table below:

Parameter	Value	Unit
Declared unit	1	ton
Conversion factor	7 850	kg/m ³

PRODUCTION PROCESS

The organic coated steel production consists of raw material acquisition, transportation, cutting to size and some cases stamping and rewinding. The final steel products are stored and packed before transportation to the customer. Steel products are packaged for transport by stacking them on bed timbers or pallets and using defective cardboard and polyethylene wrap for cover and polyester or steel wire banding for fastening.



Generic Metehe system boundary figure

SUBSTANCES UNDER EUROPEAN CHEMICALS AGENCY'S REAH, SVHC RESTRICTIONS

The product is not known to include substances from ECHA's Candidate List of Substances of Very High Concern.

CUT-OFF CRITERIA

Mass-based cut-off criteria is adhered to. The cut-off rule is reflected in the inputs of the product system studied separately for each module. Flows accounting less than 1% of the overall input mass or energy flows are excluded from the study if appropriate LCI data or even proxy data is not available. The sum of excluded flows should not exceed 5% of the total inflows (by mass or by energy). The flows knowingly excluded from the study are as follows:

- Capital equipment, infrastructure and employee commute are excluded.
- Materials of minor mass are excluded, such as paper stickers and tapes for packaging (average 0.4% of total mass of packaging materials purchased to production sites).

ALLOCATION

Steel scrap produced in manufacturing process is treated as co-product and environmental impacts are allocated to it based on physical properties, and therefore, mass-based allocation is applied. Physical allocation, mass-based allocation was applied for different product groups based on yearly production volumes (kg).

Life cycle impact assessment

The results of the impact assessment are relative figures and do not predict the effects on the weighted values of the categories, the exceedance limits, safety margins and risks.

Reading example: $1.00E-03 = 0.001$ $1.00E+03 = 1000$

Core environmental impacts / 1 ton organic coated steel – EN 15804+A2, EF 3.1									
Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Global warming potential – total (GWP-total)	kg CO ₂ eq.	2.58E+03	1.79E+01	4.05E+01	6.50E-01	1.35E+01	3.19E+02	4.26E-01	-1.66E+03
Global warming potential – fossil (GWP-fossil)	kg CO ₂ eq.	2.61E+03	1.76E+01	1.43E+01	6.57E-01	1.33E+01	3.16E+02	4.25E-01	-1.66E+03
Global warming potential – biogenic (GWP-biogenic)	kg CO ₂ eq.	-3.16E+01	9.00E-02	2.61E+01	-1.38E-02	6.76E-02	2.68E+00	-6.03E-04	-2.19E+00
Global warming potential – land use and land use change (GWP-LULUC)	kg CO ₂ eq.	6.12E-01	1.86E-01	1.00E-02	6.65E-03	1.40E-01	2.63E-01	1.34E-03	-9.80E-01
Ozone depletion (ODP)	kg CFC-11 eq.	7.40E-06	3.00E-12	3.66E-12	1.07E-13	2.26E-12	6.24E-09	1.38E-12	-6.27E-09
Acidification (AP)	mol H ⁺ eq.	6.28E+00	2.20E-02	9.66E-03	3.32E-03	3.15E-02	8.59E-01	2.65E-03	-3.94E+00
Eutrophication – aquatic freshwater (EP-F)	kg P eq.	1.39E-02	4.88E-05	3.00E-06	1.74E-06	3.67E-05	6.88E-04	6.01E-07	-1.10E-03
Eutrophication – aquatic marine (EP-M)	kg N eq.	1.63E+00	8.26E-03	3.55E-03	1.59E-03	1.40E-02	2.26E-01	6.46E-04	-9.64E-01
Eutrophication – terrestrial (EP-T)	mole N eq.	1.78E+01	8.65E-02	4.54E-02	1.72E-02	1.51E-01	2.48E+00	7.05E-03	-1.04E+01
Photochemical ozone formation (POCP)	kg NMVOC eq.	5.25E+00	1.94E-02	9.51E-03	4.30E-03	2.87E-02	8.22E-01	2.01E-03	-3.29E+00
Depletion of abiotic resources – minerals and metals (ADP-M) ¹⁾	kg Sb eq.	6.85E-02	1.20E-06	1.00E-07	4.30E-08	9.04E-07	6.56E-05	2.89E-08	-7.24E-05
Depletion of abiotic resources – fossil fuels (ADP-F) ¹⁾	MJ net calorific value	2.87E+04	2.32E+02	1.92E+01	8.28E+00	1.74E+02	4.04E+03	6.95E+00	-1.41E+04
Water use (WDP) ¹⁾	m ³ world eq. deprived	1.36E+03	8.28E-02	3.78E+00	2.96E-03	6.22E-02	1.12E+01	4.97E-02	-1.99E+01
Disclaimer 1 – The results of the environmental impact indicators ADP-M, ADP-F and WDP shall be used with care as the uncertainties on these results are high or as there is limited experience with the indicator.									

Use of natural resources / 1 ton organic coated steel									
Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Use of renewable primary energy excluding renewable primary energy resources used as raw materials (PERE)	MJ	1.80E+03	1.75E+01	2.30E+02	6.24E-01	1.31E+01	2.77E+03	1.13E+00	-9.46E+02
Use of renewable primary energy resources used as raw materials (PERM)	MJ	2.28E+02	0.00E+00	-2.28E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of renewable primary energy resources (PERT)	MJ	2.02E+03	1.75E+01	2.89E+00	6.24E-01	1.31E+01	2.77E+03	1.13E+00	-9.46E+02
Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials (PENRE)	MJ	2.86E+04	2.32E+02	1.95E+02	8.28E+00	1.74E+02	4.04E+03	6.95E+00	-1.41E+04
Use of non-renewable primary energy resources used as raw materials (PENRM)	MJ	1.76E+02	0.00E+00	-1.76E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total use of non-renewable primary energy resources (PENRT)	MJ	2.87E+04	2.32E+02	1.92E+01	8.28E+00	1.74E+02	4.04E+03	6.95E+00	-1.41E+04
Use of secondary materials (SM)	kg	1.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.29E-01
Use of renewable secondary fuels (RSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable secondary fuels (NRSF)	MJ	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Net use of fresh water (FW)	m ³	3.45E+01	8.64E-03	8.90E-02	3.09E-04	6.49E-03	1.35E+00	1.46E-03	-2.07E+00

Disposed wastes / 1 ton organic coated steel

Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed (HWD)	kg	1.64E+00	9.31E-09	4.47E-09	3.32E-10	6.99E-09	5.94E-06	1.50E-09	-1.49E-06
Non-hazardous waste disposed (NHWD)	kg	3.50E+01	3.24E-02	6.24E-01	1.16E-03	2.43E-02	8.00E-02	2.00E+01	-2.13E+01
Radioactive waste disposed (RWD)	kg	6.94E-01	4.38E-04	4.29E-04	1.56E-05	3.29E-04	2.78E-01	9.64E-05	-9.76E-02

Output flows / 1 ton organic coated steel

Impact category	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for reuse	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for recycling	kg	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.80E+02	0.00E+00	0.00E+00
Materials for energy recovery	kg	3.43E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, electricity	MJ	0.00E+00	0.00E+00	2.77E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported energy, thermal	MJ	0.00E+00	0.00E+00	4.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Other environmental indicators

Biogenic carbon content / 1 ton organic coated steel

Parameter	Quantity	Unit
Biogenic carbon content in product	0	kg C
Biogenic carbon content in packaging	7.14	kg C
Biogenic carbon content in packaging	37.52 %	kg C

The biogenic carbon content of product is zero.

End of life – Waste / 1 ton organic coated steel

Waste categories	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Hazardous waste disposed	kg	1.64E+00	9.31E-09	4.47E-09	3.32E-10	6.99E-09	5.94E-06	1.50E-09	-1.49E-06
Non-hazardous waste disposed	kg	3.50E+01	3.24E-02	6.24E-01	1.16E-03	2.43E-02	8.00E-02	2.00E+01	-2.13E+01
Radioactive waste disposed	kg	6.94E-01	4.38E-04	4.29E-04	1.56E-05	3.29E-04	2.78E-01	9.64E-05	-9.76E-02

Other environmental indicators / 1 ton organic coated steel

Other environmental indicators	Unit	A1-A3	A4	A5	C1	C2	C3	C4	D
Components for re-use	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Materials for Recycling	kg	1.01E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.80E+02	0.00E+00	0.00E+00
Material for Energy Recovery	kg	3.43E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported electrical energy	MJ	0.00E+00	0.00E+00	2.77E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Exported thermal energy	MJ	0.00E+00	0.00E+00	4.96E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Scenarios and additional technical information

Energy in the manufacturing stage

Parameter	Quantity	Unit	Data quality
Emission factor of electricity consumed in A3	0.41	g CO ₂ /kWh	Emissions from electricity production are calculated from Association of issuing bodies (AIB) residual grid mix 2024 and for Experts Professional database 2025.
Emission factor of thermal energy consumed in A3	0.34	kg CO ₂ /kWh	Emissions from thermal energy production are calculated from Experts Professional database 2025.

Transport to construction

Transport to construction related information	Value	Unit
Truck-trailer, Diesel, Euro VI E-D, 50 – 60 t gross weight	Truck-trailer, Diesel, Euro VI E-D, 50 – 60 t gross weight (61 % utilization)	
Transportation distance	240	Km
Transport capacity utilization rate	61	%
Volumetric weight of transported products	2 700	kg/m ³
Volume capacity utilization rate	1	
Specific emission, truck	0.07	kg CO ₂ eq./tkm

End-of-life stage description – module C

Parameter	Unit	Quantity
Collection process	Collected separately, %	100 %
Recovery type	kg for reuse	0
	kg for recycling	980
	kg for energy recovery	0
Disposal type	kg for final disposal	20
Assumptions for scenario development	Transport by truck (Euro 5, 11.4t payload capacity, 50 % utilization rate). Distances: 100 km for materials to landfill and 100 km for materials to recycling.	

The materials of the organic coated steel are assumed to be treated as follows: 98% is recycled and 2% landfilled

Benefits and loads beyond the system boundaries - module D

The benefits of recyclable waste generated in phase C3 are considered in phase D. The recycled steel has been modelled to avoid the use of primary materials. The scrap content in the steel has been considered and only the quantity of primary steel in the product is considered to provide benefit, i.e., avoiding double counting.

OTHER TECHNICAL INFORMATION

Not specified.

ADDITIONAL INFORMATION

No information is available regarding emissions into soil, water or air.

LCA MODELLING SOFTWARE AND DATA

LCA for Experts (Sphera) version 10.9. is used in LCA modelling. Primary data from 2024 is obtained from Metehe Oy. Secondary data from LCA for Experts (Sphera) Professional 2025 (version 2024.5) and Ecoinvent 3.11 (cut-off) databases are used in modelling. As principle, secondary data with maximum 10 years age was used in the modelling when available.

References

Standards and PCR

EN 15804:2012 + A2:2019. Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products. EN 15804 reference package based on EF 3.1 has been used.

ISO 14025:2010. Environmental labels and declarations – Type III environmental declarations – Principles and procedures.

Rakennustietosäätiö RTS sr RTS PCR 2024. 2024. Menetelmäohje rakennustuotteiden ympäristöselosteiden (Rakennustiedon EPD) laadintaan (12.11.2024).

ISO 14040:2006 Environmental management. Life cycle assessment. Principles and frameworks.

ISO 14044:2006 Environmental management. Life cycle assessment. Requirements and guidelines.

Modelling software & databases

Sphera LCA for Experts version 10.9

Sphera Professional database 2025.2

Ecoinvent 3.11 database (cut-off).

Bibliography

Association of Issuing Bodies (AIB). 2024. Residual grid mix 2024.

Metehä Oy manufactures and sells roofing and wall sheets directly to private customers and building professionals. We use high-quality warranty-coated and galvanized steel metal sheets as our raw materials. In Finland, the warranty-coated products have a quality-specific 30-50-year technical warranty and a 10-25-year aesthetic warranty.

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