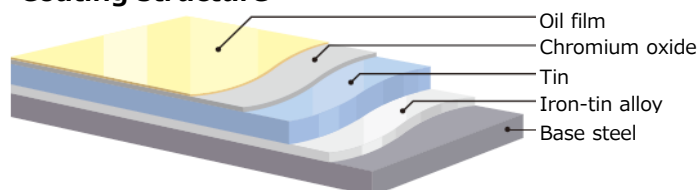




JFE Steel Corporation

Tinplate

Coating structure



Applications



Functional unit

1 metric ton

System boundary

final products intermediate products

Production stage (Raw material acquisition, Manufacturing) and Recycling potential

Main specifications of the product

Production Site:

West Japan Works (Fukuyama)

Representative Standards:

SPT, JFEET, JFEWL

Shape: Coil

Representative thickness:

t=0.13 - 0.6mm

Registration#	JR-AW-22013E-B
PCR number	PA-180000-AW-05
PCR name	Steel products (except for construction use)
Publication date	7 July 2022
Verification date	6 February 2025
Verification method	Product-by-product
Verification#	JV-AW-24040
Expiration date	14 August 2028
PCR review was conducted by:	
Approval date	10 May 2023
PCR review panel chair	Yasunari Matsuno (Chiba University)

Third party verifier*

Takahiro Atoh

Independent verification of data & declaration in accordance with ISO14025

internal external

*Auditor's name is stated if system certification has been performed.

Company Information

JFE Steel Corporation Flat Steel Products Export Dept.

<https://www.jfe-steel.co.jp/en/index.html>

1. Results of life cycle impact assessment (LCIA)

Parameter	Stage	Production stage and Recycling potential [A1],[A2],[A3] and [D]	Production stage (cradle to gate) [A1],[A2] and [A3]	Unit
Global warming IPCC2013 GWP100a		3.1E+03	4.0E+03	kg-CO ₂ eq
Acidification		-1.6E-02	1.5E+00	kg-SO ₂ eq
Photochemical ozone		3.8E-02	5.5E-02	kg-PO ₄ ³⁻ eq

Parameter	Stage	Unit	Total	[A1][A2] Raw material acquisition	[A3] Manufacturing	[D] Recycling potential
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	4.0E+03	1.1E+03	2.9E+03	-9.5E+02
Ozone layer destruction		kg-CFC-11eq	4.9E-07	2.4E-07	2.5E-07	-1.7E-07
Acidification		kg-SO ₂ eq	1.5E+00	5.3E-01	9.2E-01	-1.5E+00
Photochemical ozone		kg-C ₂ H ₄ eq	1.2E-02	9.3E-03	2.2E-03	-2.1E-01
Eutrophication		kg-PO ₄ ³⁻ eq	5.5E-02	3.5E-04	5.5E-02	-1.8E-02

2. Life cycle inventory analysis (LCI)

Parameter	Value	Unit
Non-renewable material resources	1.7E+03	kg
Non-renewable energy resources	4.4E+04	MJ
Renewable material resources	1.6E+03	kg
Renewable primary energy	1.6E+02	MJ
Consumption of freshwater	6.0E+00	m ³

3. Material composition

Material	Value	Unit
iron [Fe]	≥96.5	wt%
manganese [Mn]	≤1.0	wt%
nickel [Ni]	≤0.1	wt%
chromium [Cr]	≤0.2	wt%
molybdenum [Mo]	≤0.1	wt%
cobalt [Co]	≤0.1	wt%
tin [Sn]	≤2.0	wt%

4. Waste to disposal

Parameter	Value	Unit
Hazardous waste	0.0E+00	kg
Non-hazardous waste.	2.2E+00	kg

*Data derived from LCA and not assigned to the impact categories of LCIA

5. Additional explanation

- This EPD shows the results calculated without applying system extensions.
- Scrap recycling potential is calculated based on ISO 20915/JIS Q 20915 and shown as [D] in table 1. Recycling ratio used in this calculation is 93.0%. (Using data is 2018FY from The Japan Iron and Steel Federation, The Japan ferrous raw materials association and The Japan Steel Can recycling Association).
- The environmental impact of self-generated electricity was calculated as primary data of fuel and the basic unit data of grid power consumption is the average of 10 electric power suppliers of Japan in 2014FY.
- Each item (except iron) in table 3 is the maximum value of all product standards covered by this EPD.
- Primary data in 2021 is used.



6-1. Supplementary environmental information

The production site is certified to ISO 14001.

6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
manganese [Mn]	7349-96-5	• Industrial Safety and Health Act
nickel [Ni]	7440-02-0	• Industrial Safety and Health Act
chromium [Cr]	7440-47-3	• Industrial Safety and Health Act
molybdenum [Mo]	7439-98-7	• Industrial Safety and Health Act
cobalt [Co]	7440-48-4	• Industrial Safety and Health Act

7. Assumptions of secondary data used

IDEA v2.1.3 database is used. Steel scrap data (JP-AJ-0001) from the Japan Iron and Steel Federation are used.

8. Remarks

- July, 2023; Correction of double counting on upstream and modification of allocation method of by-product gases
- February, 2025; Modification about system boundary and allocation of by-product gases.

- For data quantification, please refer to PCR and Rules on quantification and declaration.
- Comparative assertion is permitted only when Rules on quantification and declaration are satisfied.
(Reference URL : <https://ecoleaf-label.jp/regulation/>)