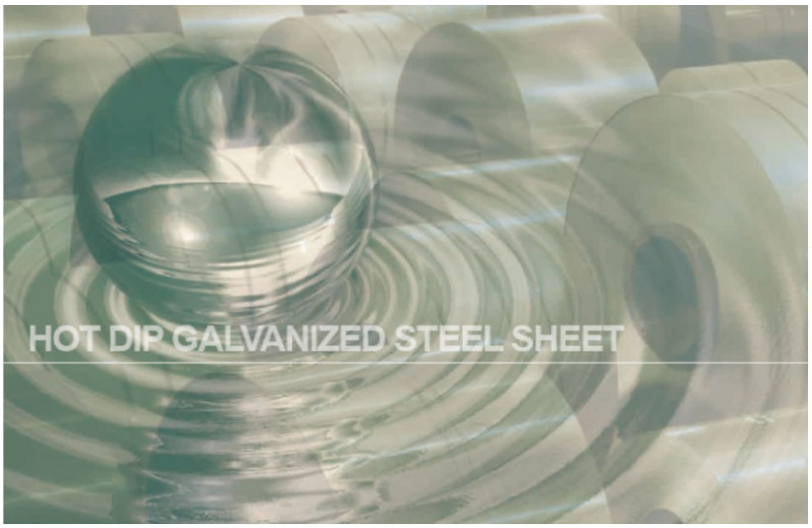
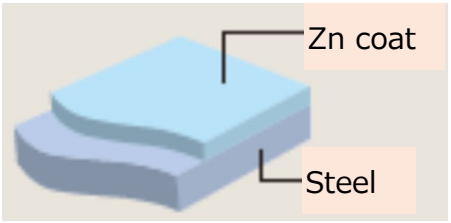
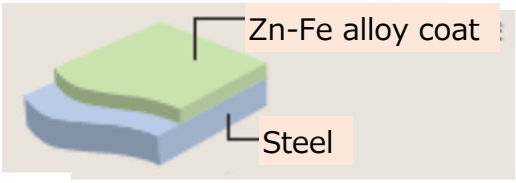
Japan EPD Program by SuMPO
Sustainable Management Promotion Organization
14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan
https://ecoleaf-label.jp/

JFE Steel Corporation

Hot-dip Galvanized and aluminium alloy coated sheets







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, East Japan Works

Representative Standards:

JIS (Japanese Industrial Standards), JFE Standards and others

Details are listed on Page 3 (8. Remarks)

Shape: Coil and Sheet

Thickness: 0.4 - 3.2mm

Registration#	JR-AW-24065E
PCR number	PA-180000-AW-05
PCR name	Steel products (except for construction use)
Publication date	28 March 2025
Verification date	12 March 2025
Verification method	Product-by-product
Verification#	JV-AW-24065
Expiration date	11 March 2030

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 Automotive Steel Business Planning Dept.
https://www.jfe-steel.co.jp/en/index.html

SuMPO EPD
Type III Environmental Declaration (EPD)
Registration number : JR-AW-24065E

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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	2.0E+03	3.1E+03	kg-CO_2eq
Acidification	-8.5E-01	7.6E-01	kg-SO_2eq
Photochemical ozone	3.5E-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_2eq	3.1E+03	8.0E+02	2.3E+03	-1.0E+03
Ozone layer destruction	kg-CFC-11eq	1.6E-04	1.6E-04	2.2E-07	-1.9E-07
Acidification	kg-SO_2eq	7.6E-01	4.4E-01	3.3E-01	-1.6E+00
Photochemical ozone	kg-C_2H_4eq	9.8E-03	8.1E-03	1.7E-03	-2.3E-01
Eutrophication	kg-PO_4^{3-}eq	5.5E-02	1.2E-05	5.5E-02	-1.9E-02

2. Life cycle inventory analysis (LCI)

Parameter		Unit
Non-renewable material resources	1.4E+03	kg
Non-renewable energy resources	3.6E+04	MJ
Renewable material resources	1.1E+03	kg
Renewable primary energy	1.5E+02	MJ
Consumption of freshwater	3.6E+00	m^3

3. Material composition

Material		Unit
iron [Fe]	≧85.8	wt%
carbon [C]	≦1.0	wt%
silicon [Si]	≦3.0	wt%
manganese [Mn]	≦4.0	wt%
phosphorus [P]	≦0.100	wt%
sulfur [S]	≦0.050	wt%
zinc [Zn]	≦5.0	wt%
aluminum [Al]	≦1.0	wt%

4. Waste to disposal

Parameter		Unit
Hazardous waste	0.0E+00	kg
Non-hazardous waste.	2.0E+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
copper [Cu]	7440-50-8	・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

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

Representative standards:
JIS (Japanese Industrial Standards):
JIS G 3302 (SGCC, SGHC, SGCH, SGCD1, SGC340, SGH340 and others)
JFE Standards:
◆JFE GALVAZINC™
Commercial quality (e.g. JFE-CB-GZ, JFE-HB-GZ), Forming quality (e.g. JFE-CC-GZ, JFE-HC-GZ)
Drawing quality (e.g. JFE-CD-GZ, JFE-HD-GZ), Deep drawing quality (e.g. JFE-CE-GZ, JFE-HE-GZ)
Structual quality, class 1 (e.g. JFE-C400-GZ, JFE-H400-GZ), class 2 (e.g. JFE-C490-GZ, JFE-H490-GZ)
Deep drawing quality with bake hardenability (e.g. JFE-CH-GZ)
Extra deep drawing quality, class 1 (e.g. JFE-CF-GZ), class 2 (e.g. JFE-CG-GZ)
Commercial quality high strength steel (e.g. JFE-HA310-GZ, JFE-CA440-GZ)
Low yield ratio quality high strength steel (e.g. JFE-CA590Y-GZ)
High stretch flange formability quality high strength steel (e.g. JFE-CA440SF-GZ) and others
◆JFE GALVAZINC ALLOY™
Commercial quality (e.g. JFE-CB-GA, JFE-HB-GA), Forming quality (e.g. JFE-CC-GA, JFE-HC-GA)
Drawing quality (e.g. JFE-CD-GA, JFE-HD-GA), Deep drawing quality (e.g. JFE-CE-GA, JFE-HE-GA)
Structual quality, class 1 (e.g. JFE-C400-GA, JFE-H400-GA), class 2 (e.g. JFE-C490-GA, JFE-H490-GA)
Deep drawing quality with bake hardenability (e.g. JFE-CH-GA)
Extra deep drawing quality, class 1 (e.g. JFE-CF-GA), class 2 (e.g. JFE-CG-GA)
Commercial quality high strength steel (e.g. JFE-HA310-GA, JFE-CA440-GA)
Low yield ratio quality high strength steel (e.g. JFE-CA590Y-GA)
High stretch flange formability quality high strength steel (e.g. JFE-CA440SF-GA) and others
◆ECOGAL-Neo™
Commercial quality (e.g. JFE-CB-ECOG, JFE-HB-ECOG), Forming quality (e.g. JFE-CC-ECOG)
Drawing quality (e.g. JFE-CD-ECOG), Deep drawing quality (e.g. JFE-CE-ECOG)
Structual quality, class 1 (e.g. JFE-C340-ECOG, JFE-H340-ECOG), class 2 (e.g. JFE-C490-ECOG, JFE-H490-ECOG)
Commercial quality high strength steel (e.g. JFE-CA400-ECOG, JFE-HA400-ECOG)
Including others requested by customers based on these standards

- 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/)