



EcoLeaf

Type III Environmental Declaration (EPD)

Registration number : JR-AW-22019E-A

Japan EPD Program by SuMPO

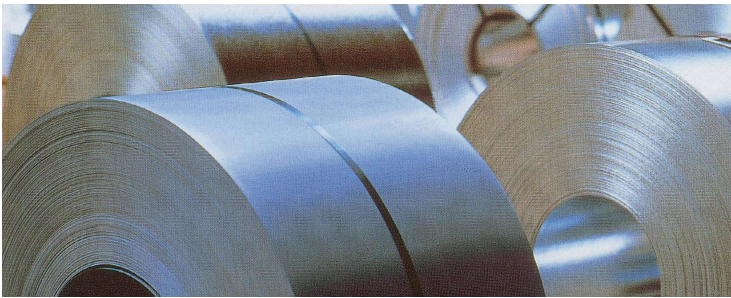
Sustainable Management Promotion Organization

14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan

<https://ecoleaf-label.jp>

NIPPON STEEL | NIPPON STEEL CORPORATION

Cold-Rolled Steel Sheets and Coils (SUYP, LSS, SPCCE)



Functional unit

1 t

System boundary

final products intermediate products

Production Stage and optional supplementary information

Main specifications of the product

Production sites : East Nippon Works, Kansai Works,
Setouchi Works

Main standards :
NIPPON STEEL Grade (SUYP, LSS, SPCCE)

Type : Coil etc.

Main sizes (unit: mm, t: thickness)

t=0.18~3.2

Company Information

NIPPON STEEL CORPORATION

<https://www.nipponsteel.com/en/product/sheet/list/>

Registration#	JR-AW-22019E-A
PCR number	PA-180000-AW-05
PCR name	Steel products except for construction use
Publication date	11/25/2022
Verification date	01/10/2024
Verification method	Product-by-product
Verification#	JV-AW-24003
Expiration date	10/24/2027
PCR review was conducted by:	
Approval date	05/10/2023
PCR review panel chair	Yasunari Matsuno (Chiba University)

Third party verifier*

Tetsuya Okuyama

Independent verification of data & declaration in accordance with ISO14025

internal external

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

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1. Results of life cycle impact assessment (LCIA)

Parameter	Stage	(1)+(2)+(3)	(1)+(2)	Unit
Global warming IPCC2013 GWP100a		1300	2500	kg-CO ₂ eq
Acidification		1.1	2.9	kg-SO ₂ eq
Eutrophication		0.073	0.094	kg-PO ₄ ³⁻ eq

Table Legend
 (1)Raw material supply
 (2)Production
 (3)Recycling potential

Parameter	stage	Unit	(1)+(2)	(1)	(2)	(3)
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	2.5E+03	5.8E+02	1.9E+03	-1.2E+03
Ozone layer destruction		kg-CFC-11eq	-6.7E-08	1.3E-07	-1.9E-07	-2.1E-07
Acidification		kg-SO ₂ eq	2.9E+00	7.2E-01	2.2E+00	-1.8E+00
Photochemical oxidant		kg-C ₂ H ₄ eq	2.9E-02	5.7E-03	2.3E-02	-2.5E-01
Eutrophication		kg-PO ₄ ³⁻ eq	9.4E-02	1.1E-02	8.4E-02	-2.2E-02

2. Life cycle inventory analysis (LCI)

Parameter	Unit
Non-renewable material resources	6.3E+02 kg
Renewable material resources	1.3E+03 kg
Non-renewable energy resources	2.7E+04 MJ
Renewable energy resources	5.6E+02 MJ
Consumption of freshwater	9.5E+00 m ³

4. Waste to disposal

Parameter	Unit
Hazardous waste	- kg
Non-hazardous waste.	1.7E+00 kg

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

3. Material composition

Material	Unit
Fe	≥95 %
C	≤0.1 %
Si	≤1 %
Mn	≤1 %
P	≤0.2 %
S	≤0.05 %
Al	≤1 %

5. Additional explanation

- Each LCI includes allocation for scrap recycling as an optional supplementary information(3) at table.1 . Recycling rate (RR) used in this calculation is 93.0% (calculated based on ISO 20915/JIS Q20915 and using Japan data in 2018 from Japan Iron and Steel Federation and Japan Steel Can Recycling Association).
- Scenarios of transport to site follow the PCR.
- Each item (except iron) in table 3 is the maximum value of all product standards covered by this EPD. However, the iron content in each product is never less than 95%, and the contents of other components are adjusted.
- Primary data collected in 2018. The source of the unit power consumption is the average of 10 electric power suppliers of Japan in 2014.
- For the transport of metallurgical coal, the amount is double counted due to the characteristics of the inventory database on which this estimation is based.



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6-1. Supplementary environmental information

Each production area has ISO 14001 certificate.

6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
Manganese [Mn]	7439-96-5	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
Copper [Cu]	7440-50-8	Industrial Safety and Health Act
Tin [Sn]	7440-31-5	Industrial Safety and Health Act

7. Assumptions of secondary data used

The IDEA2.1.3 data and steel scrap data (JP-AJ-0001) from the Japan Iron and Steel Federation are used.

8. Remarks

January 2024; Modification about allocation method 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/>)

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