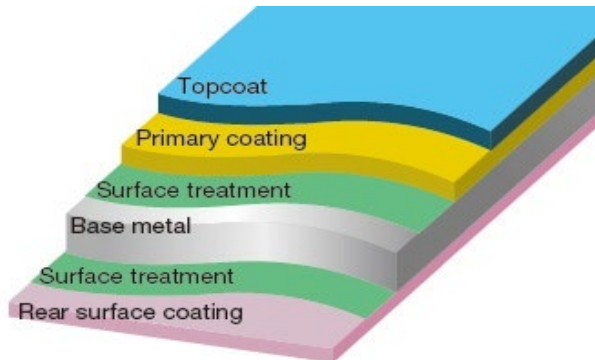




Color Coated Steel Sheets (for construction)

Coating Structure
(representative example)



Functional unit

1 t

System boundary

final products intermediate products

Main specifications of the product

Production sites:

Setouchi Works

Main standards:

NIPPON STEEL standards

For details, please refer to "8. Remarks" in EL sheet 2.

Shape: Coil and sheet

Main thickness (unit: mm, t:=thickness) :

t =0.3~1.2

Company Information

NIPPON STEEL CORPORATION

Flat Products Unit Flat Products Planning Dept.

<https://www.nipponsteel.com/>

Registration#	JR-AJ-22005E-B
PCR number	PA-180000-AJ-06
PCR name	Steel products for construction
Publication date	4/21/2022
Verification date	1/19/2024
Verification method	Product-by-product
Verification#	JV-AJ-24019
Expiration date	3/17/2027
PCR review was conducted by:	
Approval date	5/10/2023
PCR review panel chair	Yasunari Matsuno (Chiba University)

Third party verifier*

Tomoko Fuchigami

Independent verification of data & declaration in accordance with ISO14025 and ISO21930

internal external

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

Registration number : JR-AJ-22005E-B

1. Results of life cycle impact assessment (LCIA)

Parameter	Stage	[A1~A3] + [D]	[A1~A3]	Unit
Global warming IPCC2013 GWP100a		2000	3100	kg-CO ₂ eq
Acidification		0.44	2.2	kg-SO ₂ eq
Eutrophication		0.027	0.048	kg-PO ₄ ³⁻ eq

Be sure to refer to "6-1. Supplementary environmental information" for Scope 3 and carbon footprint calculations.

Table Legend

【A1】: Raw material supply

【A2】: Transport to factory

【A3】: Manufacturing

【D】: Recycling potential

【A1~A3】: sum of 【A1】, 【A2】 and 【A3】 (cradle to gate)

Parameter	stage	Unit	[A1~A3]	[A1]	[A2]	[A3]	[D]
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	3.1E+03	4.4E+02	1.3E+02	2.5E+03	-1.1E+03
Ozone layer destruction		kg-CFC-11eq	2.1E-05	1.1E-07	8.3E-10	2.1E-05	-2.1E-07
Acidification		kg-SO ₂ eq	2.2E+00	5.0E-01	6.5E-02	1.6E+00	-1.7E+00
Photochemical ozone		kg-C ₂ H ₄ eq	2.2E-02	4.5E-03	9.9E-04	1.7E-02	-2.4E-01
Eutrophication		kg-PO ₄ ³⁻ eq	4.8E-02	1.2E-03	7.5E-13	4.7E-02	-2.1E-02

2. Life cycle inventory analysis (LCI)

項目		単位
Non-renewable material resources	6.0E+02	kg
Non-renewable energy resources	3.7E+04	MJ
Renewable material resources	1.1E+03	kg
Renewable primary energy	-3.7E+02	MJ
Consumption of freshwater	6.4E-01	m ³

3. Material composition

Material		Unit
iron [Fe]	≥95.0	%
carbon [C]	≤1.10	%
silicon [Si]	≤3.00	%
manganese [Mn]	≤3.00	%
phosphorus [P]	≤0.050	%
sulfur [S]	≤0.050	%
zinc [Zn]	≤5.00	%

4. Waste to disposal

Parameter		Unit
Hazardous waste	-	kg
Non-hazardous waste.	2.1E+00	kg

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

5. Additional explanation

① Each LCI includes allocation for scrap recycling as an optional supplementary information [End-of-Life].

The indirect effect is added to the total value in Tables [Raw material acquisition], [Production] and [Distribution].

Recycling rate (RR) used in this calculation is 93.0%

(calculated based on ISO 20915/JIS Q 20915 standards and using FY 2018 data from Japan Steel Can Recycling Association and Tetsugen Association).

② Material transport scenarios based on PCR.

③ 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.

④ Primary data collected in 2018. The source of the unit power consumption is the average of 10 electric power suppliers of Japan in 2014.

⑤ For the transport of metallurgical coal, the amount is double counted in Tables [Raw material acquisition] and [Distribution] due to the characteristics of the consumption rate database on which this estimation is based.

⑥ Each value of the results shown in this sheet is the mean value for Color Coated Steel Sheets.

6-1. Supplementary environmental information

Setouchi Works has ISO 14001 certificates.

Note on Global warming IPCC2013 GWP100a: When purchasers of this product calculate GHG emissions under GHG Protocol Scope 3, Category 1 for their organization, or when calculating the carbon footprint of products manufactured using this product, they must check the following URL:

<https://www.nipponsteel.com/en/product/cfp/certificate.html>

(The content of the above URL is not subject to EPD verification.)

6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
manganese [Mn]	7439-96-5	Industrial Safety and Health Act

7. Assumptions of secondary data used

We use the IDEA v2.1.3 data and steel scrap data(JP-AJ-0001) from the Japan Iron and Steel Federation.

8. Remarks

<The details about Main standards>

Typical Type of Base Sheet and Symbols (NIPPON STEEL standards):

Base Sheet:Hot-dip galvanised steel sheet and strip ...e.g.:PNSGCC-1SN,CGCC

Base Sheet:Hot-dip galvanized steel sheet and strip ...e.g.:PNSACC-1SN

Base Sheet:Hot-dip zinc-aluminium-magnesium alloy-coated steel sheet and strip...e.g.:PNSDCC-1SN

Base Sheet:Cold-rolled steel sheet and strip...e.g.:PNSCC-1SN

Base Sheet:Electrogalvanized steel sheet and strip...e.g.:PNSECC-1SN

- January 2024; Modification about allocation method of by-product gases
- April 2026: Additional explanatory notes added to "6-1. Supplementary environmental information".

- 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/>)