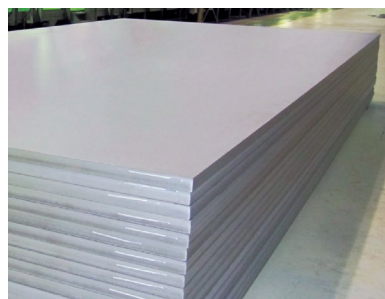


NIPPON STEEL | NIPPON STEEL CORPORATION

Stainless Steel (SUS304)



Functional unit

1t

System boundary

final products intermediate products

Production Stage

(Raw material supply, Transport, Manufacturing)

Main specifications of the product

Production sites :

Yamaguchi Works, East Nippon Works, Kyushu Works

Main standards :

JIS(Japanese Industrial Standards)

See Table 8.Remarks for details

Type : Sheet, Strip, Wire rod, Steel bar

Main sizes(unit:mm, t:thickness, φ:diameter) :

t=0.1~150, φ=5.5~60

Company Information

NIPPON STEEL CORPORATION

Stainless Steel Unit Stainless Steel Technology Div.

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

Registration#	JR-BO-24004E-C
PCR number	PA-187000-BO-03
PCR name	Stainless steel products
Publication date	11/25/2024
Verification date	10/11/2024
Verification method	Product-by-product
Verification#	JV-BO-24004
Expiration date	10/10/2029
PCR review was conducted by:	
Approval date	2/4/2023
PCR review panel chair	Ken Yamagishi Sustainable Management Promotion Organization

Third party verifier*

Naoki Makino

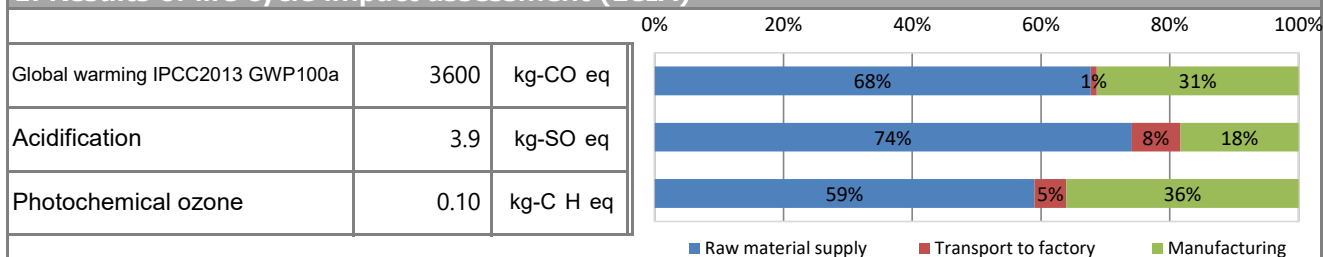
Independent verification of data & declaration in accordance with ISO14025 and ISO21930

internal external

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

Registration number : JR-BO-24004E-C

1. Results of life cycle impact assessment (LCIA)



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

Parameter	stage	Unit	Total	Raw material supply	Transport to factory	Manufacturing
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	3.6E+03	2.4E+03	3.4E+01	1.1E+03
Ozone layer destruction		kg-CFC-11eq	1.4E-04	1.3E-04	2.6E-10	6.1E-06
Acidification		kg-SO ₂ eq	3.9E+00	2.9E+00	3.0E-01	7.1E-01
Photochemical ozone		kg-C ₂ H ₄ eq	1.0E-01	5.9E-02	5.0E-03	3.6E-02
Eutrophication		kg-PO ₄ ³⁻ eq	1.3E+00	8.4E-03	2.2E-13	1.3E+00

2. Life cycle inventory analysis (LCI)

Parameter	Unit	Value
Non-renewable material resources	kg	4.5E+02
Non-renewable energy	MJ	4.8E+04
Renewable material resources	kg	8.2E+02
Renewable primary energy	MJ	1.7E+03
Consumption of freshwater	m ³	4.8E+00

3. Material composition

Material	Unit	Value
C	%	≦ 0.08
Si	%	≦ 1.0
Mn	%	≦ 2.0
P	%	≦ 0.045
S	%	≦ 0.03
Ni	%	≦ 10.5
Cr	%	≦ 20
Fe	%	≦ 66

4. Waste to disposal

Parameter	Unit	Value
Hazardous waste	kg	0.0E+00
Non-hazardous waste	kg	3.7E+00

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

5. Additional explanation

- Scenarios of transport to site follow the PCR. For the inter-factory transportation for intermediate products, distances were measured using mapping software.
- Each item (except iron) in table 3 is the maximum value of all product standards covered by this EPD. The iron content is adjusted by the contents of other components.
- Primary data collected in 2022. The source of the unit power consumption is the average of 10 electric power suppliers of Japan in 2014.
- The calculation results are weighted averages for sheet, bar, wire rod and plate.
- Products made from external crude steel (melted) are not included.

6-1. Supplementary environmental information

Each production area has ISO 14001 certificate.

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
Chromium[Cr]	7440-47-3	Industrial Safety and Health Act
Nickel[Ni]	7440-02-0	Industrial Safety and Health Act

7. Assumptions of secondary data used

The IDEA2.1.3 data is used.

8. Remarks

○JIS(Japanese Industrial Standards) : JIS G 4303(Stainless steel bars), JIS G 4304(Hot-rolled stainless steel plate, sheet and strip), JIS G 4305(Cold-rolled stainless steel plate, sheet and strip), JIS G 4308(Stainless steel wire rods)

- November 2025 : Change to contact details.
- April 2025 : Modification based on the change of company name.
- 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/>)