

**NIPPON STEEL | NIPPON STEEL CORPORATION**

**Stainless Steel Sheet (SUS430)**



**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

Main standards :

JIS(Japanese Industrial Standards)

See Table 8.Remarks for details

Type : Sheet, Strip

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

t=0.1~9.0

**Company Information**

NIPPON STEEL CORPORATION

Stainless Steel Unit Stainless Steel Technology Div.

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

<b>Registration#</b>	JR-BO-24009E-C
<b>PCR number</b>	PA-187000-BO-03
<b>PCR name</b>	Stainless steel products
<b>Publication date</b>	March 19, 2025
<b>Verification date</b>	March 10, 2025
<b>Verification method</b>	Product-by-product
<b>Verification#</b>	JV-BO-24009
<b>Expiration date</b>	March 9, 2030
<b>PCR review was conducted by:</b>	
<b>Approval date</b>	February 4, 2023
<b>PCR review panel chair</b>	Ken Yamagishi Sustainable Management Promotion Organization

**Third party verifier\***

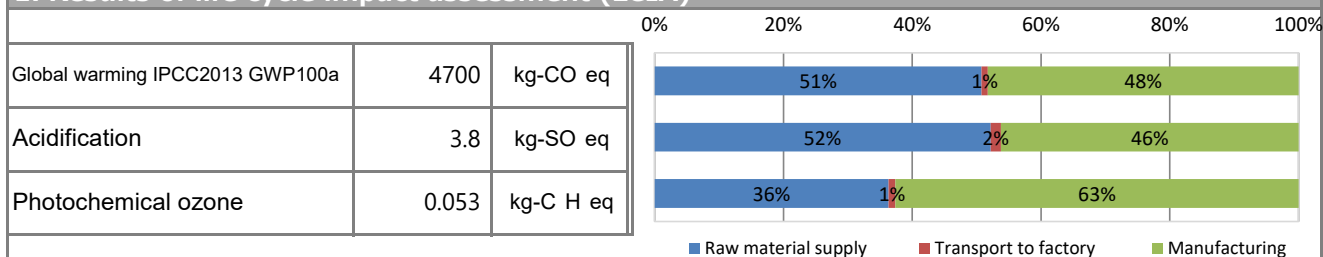
Kengo Minamiyama

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

internal     external

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

## 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 <sub>2</sub> eq	4.7E+03	2.4E+03	4.6E+01	2.3E+03
Ozone layer destruction		kg-CFC-11eq	5.2E-05	3.3E-07	3.2E-10	5.2E-05
Acidification		kg-SO <sub>2</sub> eq	3.8E+00	2.0E+00	6.1E-02	1.8E+00
Photochemical ozone		kg-C <sub>2</sub> H <sub>4</sub> eq	5.3E-02	1.9E-02	5.8E-04	3.3E-02
Eutrophication		kg-PO <sub>4</sub> <sup>3-</sup> eq	3.1E-01	2.1E-05	2.8E-13	3.1E-01

## 2. Life cycle inventory analysis (LCI)

Parameter	Unit	Value
Non-renewable material resources	kg	7.5E+02
Non-renewable energy	MJ	5.9E+04
Renewable material resources	kg	1.4E+03
Renewable primary energy	MJ	1.3E+03
Consumption of freshwater	m <sup>3</sup>	1.5E+01

## 3. Material composition

Material	Unit	Value
C	%	≒ 0.12
Si	%	≒ 0.75
Mn	%	≒ 1.0
P	%	≒ 0.04
S	%	≒ 0.03
Ni	%	≒ 0.6
Cr	%	≒ 18
Fe	%	≒ 79

## 4. Waste to disposal

Parameter	Unit	Value
Hazardous waste	kg	0.0E+00
Non-hazardous waste	kg	4.0E+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.
- Stainless steel slab for this product is made by Nippon Steel Kyushu Works.

### 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 4304(Hot-rolled stainless steel plate, sheet and strip), JIS G 4305(Cold-rolled stainless steel plate, sheet and strip)

- 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/>)