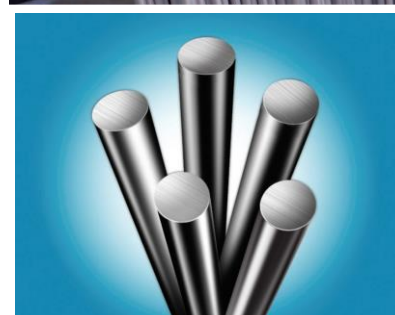




## Stainless Steel (SUS430)



### Functional unit

1 t

### 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, Wire rod, Steel bar

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

t=0.1~9.0, φ=5.5~60

### Company Information

NIPPON STEEL CORPORATION

Stainless Steel Unit Stainless Steel Technology Div.

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

Registration#	JR-BO-24003E-A
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-24003
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

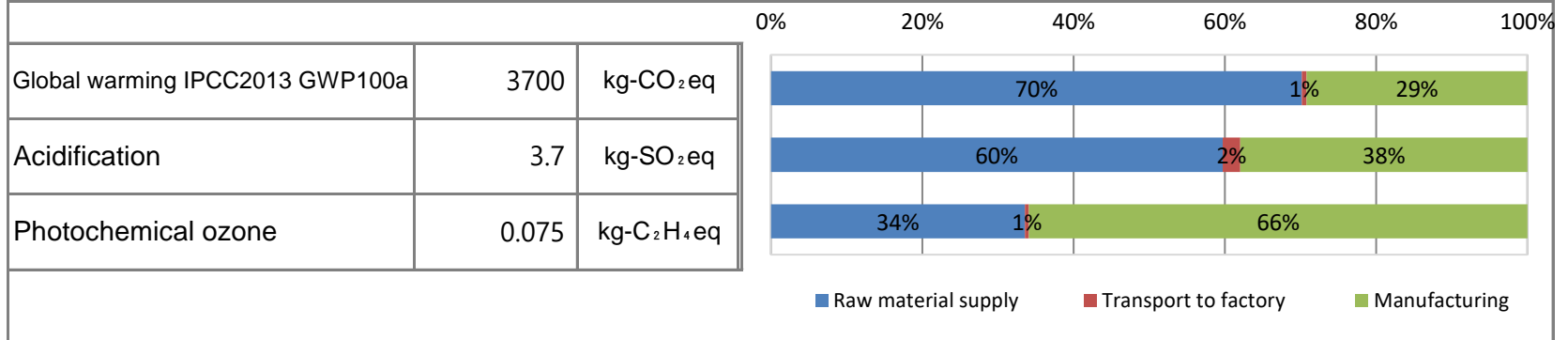
Independent verification of data & declaration in accordance with ISO14025 and ISO21930

internal     external

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

Registration number : JR-BO-24003E-A

## 1. Results of life cycle impact assessment (LCIA)



Parameter	stage	Unit	Total	Raw material supply	Transport to factory	Manufacturing
Global warming IPCC2013 GWP100a		kg-CO <sub>2</sub> eq	3.7E+03	2.6E+03	2.3E+01	1.1E+03
Ozone layer destruction		kg-CFC-11eq	1.0E-04	1.0E-04	1.9E-10	1.8E-06
Acidification		kg-SO <sub>2</sub> eq	3.7E+00	2.2E+00	8.7E-02	1.4E+00
Photochemical ozone		kg-C <sub>2</sub> H <sub>4</sub> eq	7.5E-02	2.5E-02	4.3E-04	4.9E-02
Eutrophication		kg-PO <sub>4</sub> <sup>3-</sup> eq	2.8E-01	3.5E-05	1.6E-13	2.8E-01

## 2. Life cycle inventory analysis (LCI)

Parameter	Value	Unit
Non-renewable material resources	2.2E+02	kg
Non-renewable energy	5.0E+04	MJ
Renewable material resources	5.6E+02	kg
Renewable primary energy	1.1E+03	MJ
Consumption of freshwater	1.3E+01	m <sup>3</sup>

## 4. Waste to disposal

Parameter	Value	Unit
Hazardous waste	0.0E+00	kg
Non-hazardous waste	4.3E+01	kg

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

## 3. Material composition

Material	Value	Unit
C	≒ 0.12	%
Si	≒ 0.75	%
Mn	≒ 1.00	%
P	≒ 0.040	%
S	≒ 0.030	%
Ni	≒ 0.60	%
Cr	≒ 18.00	%
Fe	≒ 79	%

## 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 and wire rod.
- Stainless steel slab and billet for this product are made by Yamaguchi Works.



SuMPO EPD

Type III Environmental Declaration (EPD)

Registration number : JR-BO-24003E-A

Japan EPD Program by SuMPO

Sustainable Management Promotion Organization  
14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan  
<https://ecoleaf-label.jp/>

### 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
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)      • April 2025; Modification based on the change of company name

- 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/>)

Registration number : JR-BO-24003E-A