

NIPPON STEEL
NIPPON STEEL CORPORATION

Seamless OCTG and Linepipe



Functional unit

1t

System boundary

final products intermediate products

Production stage and optional supplementary info

Main specifications of the product

Production site : Kansai Works Wakayama area
(Wakayama, Kainan)

Standards : API 5CT and 5L grades
ISO 11960 and 3183
DNVGL-ST-F101
SM grades (for sour and high collapse service, extra high strength grade etc.)

Size range : OD : 26.7mm(1.03") - 426.0mm (16.8")
WT : 2.5mm - 50mm (2.0")
Length : up to 14.0mtr (45.6ft)

Company Information

Nippon steel Corporation
Energy Tubular Products Marketing Div.
<https://www.nipponsteel.com/>
<http://www.tubular.nipponsteel.com/>

Registration#	JR-AW-21003E-B
PCR number	PA-180000-AW-05
PCR name	Steel products (excluding construction), intermediate products
Publication date	5/26/2021
Verification date	1/12/2024
Verification method	Product-by-product
Verification#	JV-AW-24009
Expiration date	1/11/2029
PCR review was conducted by:	
Approval date	5/10/2023
PCR review panel chair	Yasunari Matsuno (Chiba University)

Third party verifier*

Yasuo Koseki

Independent verification of data & declaration in accordance with ISO14025

internal external

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

1. Results of life cycle impact assessment (LCIA)

Parameter	stage	Production and Indirect Impact *1	Production only*2	Unit
Global warming IPCC2013 GWP100a		1600	2800	kg-CO ₂ eq
Acidification		0.092	2.0	kg-SO ₂ eq
Eutrophication		-0.0028	0.019	kg-PO ₄ -eq

*1: sum of (1), (2) and Indirect Impact *2: sum of (1) and (2)

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

Parameter	stage	Unit	Sum of (1) and (2)	(1) Sourcing of Raw Materials	(2) Production	Indirect Impact
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	2.8E+03	6.0E+02	2.2E+03	-1.2E+03
Ozone layer destruction		kg-CFC-11eq	1.1E-05	1.5E-07	1.1E-05	-2.2E-07
Acidification		kg-SO ₂ eq	2.0E+00	6.6E-01	1.3E+00	-1.9E+00
Photochemical ozone		kg-C ₂ H ₄ eq	2.8E-02	5.7E-03	2.2E-02	-2.6E-01
Eutrophication		kg-PO ₄ ³⁻ eq	1.9E-02	1.8E-05	1.9E-02	-2.2E-02

2. Life cycle inventory analysis (LCI)

Parameter	Unit	Unit
Non-renewable material resources	7.9E+02	kg
Non-renewable energy resources	3.6E+04	MJ
Renewable material resources	8.8E+02	kg
Renewable primary energy	8.6E+01	MJ
Consumption of freshwater	2.2E+01	m ³

3. Material composition

Material	Unit	Unit
Iron [Fe]	≥91.67	%
Manganese [Mn]	≤1.60	%
Chromium [Cr]	≤3.50	%
Molybdenum [Mo]	≤1.24	%
Copper [Cu]	≤1.00	%
Nickel [Ni]	≤0.99	%

4. Waste to disposal

Parameter	Unit	Unit
Hazardous waste	0.0E+00	kg
Non-hazardous waste.	1.9E+00	kg
Treated MSW for landfill	0.0E+00	kg
Treated industrial waste for landfill	1.9E+00	kg

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

5. Additional explanation

1) As the indirect impact, the impact of scrap recycling was evaluated based on ISO 20195. The impact of recycling is shown in the "Indirect Impact" column of the table above. Recycling rate(RR) of this EPD is 93.0%(calculated based on ISO 20915 using 2018FY Japan data (data source: The Japan Iron & Steel Federation, The Japan ferrous raw materials association, and Japan Steel Can Recycling Association))

2) Scenario of transport to site is based on PCR.

3) Data source for electricity is the average of 10 electric power suppliers of Japan in 2014FY.

4) The primary data is from 2018FY.



6-1. Supplementary environmental information

Certified by ISO14001. For Latest Sustainability report, please visit <https://www.nipponsteel.com/en/csr/report/>
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	Article 57-2(1) of the Industrial Safety and Health Act
Chromium [Cr]	7440-47-3	Article 57-2(1) of the Industrial Safety and Health Act
Molybdenum [Mo]	7439-98-7	Article 57-2(1) of the Industrial Safety and Health Act
Copper [Cu]	7440-50-8	Article 57-2(1) of the Industrial Safety and Health Act
Nickel [Ni]	7440-02-0	Article 57-2(1) of the Industrial Safety and Health Act

7. Assumptions of secondary data used

IDEA v2.1.3 is used. JP-AJ-0001 is used as the scrap LCI.

8. Remarks

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/>)