



EcoLeaf

Type III Environmental Declaration (EPD)

Registration number : JR-AJ-23022E

Japan EPD Program by SuMPO

Sustainable Management Promotion Organization

14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo Japan

<https://ecoleaf-label.jp/>



OSAKA STEEL CO., LTD.

Elevator guide rails



Functional unit

1 t

System boundary

final products intermediate products
 Production Stage and optional supplementary information

Main specifications of the product

Production sites : Sakai Works
 Main standards :
 Standards approved by the Minister of Land, Infrastructure, Transport and Tourism (OSC 630-2 SW, OSC630-2 SW140)
 Main cross-sectional shapes :
 T89/B, T127-1/B, T127-2/B,
 T140-1/B, T140-2/B, T140-3/B

Company Information

OSAKA STEEL CO., LTD.
 Production&Technical Control Div. Technical Control Group
 TEL: +81-6-6204-0300 <https://www.osaka-seitetu.co.jp/en/contact/>

Registration#	JR-AJ-23022E
PCR number	PA-180000-AJ-06
PCR name	Steel products for construction use
Publication date	12/25/2023
Verification date	11/21/2023
Verification method	Product-by-product
Verification#	JV-AJ-23022
Expiration date	11/20/2028
PCR review was conducted by:	
Approval date	5/10/2023
PCR review panel chair	Yasunari Matsuno Chiba University

Third party verifier*

Wataru Kawamura

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

internal external

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

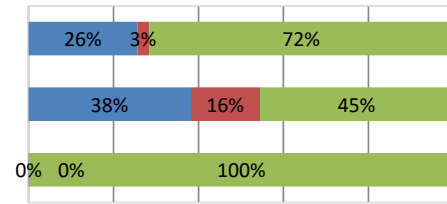
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1. Results of life cycle impact assessment (LCIA)

Parameter	stage	[A1~A3] + [D]	[A1~A3]	Unit
Global warming IPCC2013 GWP100a		1300	950	kg-CO2eq
Acidification		1.1	0.50	kg-SO2eq
Eutrophication		0.0078	0.0010	kg-PO43-eq

0% 20% 40% 60% 80% 100%



■ [A1]Raw mterial supply ■ [A2]Transport to factory
■ [A3]Manufacturing

Table Legend

[A1~A3]:sum of [A1],[A2]and[A3](cradle to gate)

[A1~A3]+[D]: sum of [A1],[A2],[A3]and [D](cradle to gate with allocation for scrap recycling)

Parameter	stage	Unit	[A1~A3]	[A1]Raw mterial supply	[A2] Transport to factory	[A3] Manufacturing	[D] Recycling potential
Global warming IPCC2013 GWP100a		kg-CO ₂ eq	9.5E+02	2.4E+02	2.6E+01	6.8E+02	3.7E+02
Ozone layer destruction		kg-CFC-11eq	2.9E-06	2.9E-06	2.2E-10	5.3E-08	6.7E-08
Acidification		kg-SO ₂ eq	5.0E-01	1.9E-01	8.2E-02	2.3E-01	5.7E-01
Photochemical ozone		kg-C ₂ H ₄ eq	1.7E-02	2.2E-03	1.5E-04	1.5E-02	8.0E-02
Eutrophication		kg-PO ₄ ³⁻ eq	9.6E-04	2.3E-06	1.9E-13	9.6E-04	6.9E-03

2. Life cycle inventory analysis (LCI)

Parameter	Unit
Non-renewable material resources	3.5E+01 kg
Non-renewable energy resources	1.5E+04 MJ
Renewable material resources	3.1E+02 kg
Renewable primary energy	3.3E+02 MJ
Consumption of freshwater	8.5E-01 m ³

3. Material composition

Material	Unit
iron [Fe]	≥96.0 %
carbon [C]	≤0.21 %
silicon [Si]	≤0.35 %
manganese [Mn]	≤1.5 %
phosphorus [P]	≤0.04 %
sulfur [S]	≤0.04 %
copper [Cu]	≤0.55 %
nitrogen [N]	≤0.012 %
tin [Sn]	≤0.06 %
vanadium [V]	≤0.04 %

4. Waste to disposal

Parameter	Unit
Hazardous waste	0.0E+00 kg
Non-hazardous waste.	1.5E+02 kg

5. Additional explanation

- Each LCI includes allocation for scrap recycling as an optional supplementary information [D] at table.1 . Recycling rate (RR) used in this calculation is 93.0% (calculated based on ISO 20915/JIS Q20915 and using Japan data in 2018 from Japan Iron and Steel Federation and Japan Steel Can Recycling Association).
- Scenarios of transport to site follow the PCR.
- 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 96.0%, and the contents of other components are adjusted.
- Primary data collected in 2021. The source of the unit power consumption is the average of 10 electric power suppliers of Japan in 2014.



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6-1. Supplementary environmental information

Each production site is certified to ISO 14001. (Certification Number E729)

6-2. Regulated hazardous substances

Substance	CAS No.	Reference to standards or regulations
manganese [Mn]	7439-96-5	Industrial Safety and Health Act
copper [Cu]	7440-50-8	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

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- 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/>)

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