SuMPO EPD JAPAN VERIFIED

SuMPO EPD Japan

Third party verified

Environmental Product Declaration

In confromance with

ISO14025 | ISO14040 | ISO14044

KURIMOTO

Kurimoto, Ltd.

Ductile Iron Pipe (DN75~250)

Registration number	Verification date	Publication date	Expiration date	EPD type
SuMPO-EPD-2512-44-1	2025/12/15	2026/1/26	2030/12/14	Single Product EPD

* First publication date

Additional standards in conformance

ISO21930:2007

EPD can be updated or withdrawn during the validity period. To confirm the validity of this EPD, check the following website:
https://ecoleaf-label.jp/epd/search

●General Information

＞Programme

Programme name	SuMPO EPD Japan
Programme operator	Sustainable Management Promotion Organization (SuMPO)
Address	KANDA SQUARE GATE 4F, 14-8, Uchikanda 1-chome, Chiyoda-ku, Tokyo, 101-0047, Japan
Website	https://ecoleaf-label.jp

＞GPI and PCR

GPI	SuMPO EPD Japan General Program Instructions v.2.1.1
PCR name	Core-PCR for Construction products
PCR registration number	SuMPO-PCR-01000-2-0-1
PCR publication date	2025/03/31
PCR review panel chair	Toshiharu Ikaga
PCR valid until	2030/03/30
PCR issuer	Sustainable Management Promotion Organization (SuMPO)

＞Verification

Verification Type	Third-party verification in conformance with ISO14025 and ISO 21930:2007		
	☐ Internal	■ External	
	■ Third-party verification by individual verifier	☐ Third-party verification by verification body	☐ Third-party verification by system certification
選択してください	Tomoko Fuchigami（EFPRO LLC.）		

＞Standards

Standards in conformance with;	■ ISO14040:2006	■ ISO14044:2006	☐ ISO14067:2018
	■ ISO14025:2006	■ ISO21930:2007	☐ ISO21930:2017
	☐ EN15804+A2	☐ EN50693:2019	☐ ISO/IEC63366:2025

EPD owner is responsible for the information contained in the EPD and for environmental claims related to the information. For any inquiries or requests regarding the content of the EPD, please contact the EPD owner.
EPDs are comparable only if they comply with the same standards, use the same sub-PCR where applicable, include all relevant information modules and are based on equivalent scenarios with respect to the context of construction works. Comparability of EPDs is limited to those applying a functional unit.

The LCIA results are relative expressions and do not predict impacts on category endpoints, the exceedance of thresholds, safety margins or risks.

When using weighted averages for calculation, the life cycle impact assessment results, life cycle inventory analysis-related information, waste-related information, and environmental information on output flows do not correspond to information about a specific product.

●EPD Owner's Information

Name of company and dept.	Kurimoto, Ltd. (Ductile Iron Pipe Division)
Address	1-12-19, Kitahorie, Nishi-ku, Osaka
Contact	+81-6-6538-7731
LCA practitioner	Planning Sec., Administration Dept., Ductile Iron Pipe Div., Kurimoto, Ltd.
Company description	Established in 1909, Kurimoto, Ltd. supports social infrastructure through its Lifeline, Machinery, and Construction Materials businesses. We operate ISO 9001 and 14001 certified factories dedicated to realizing a sustainable society.

●Product Information

Product name		Ductile Iron Pipe (DN75~250)		
Product /model number		Type GX, Type NS, Type K, Type T		
Product sepcification	Function	High-strength, ductile iron pipes for potable water transmission featuring excellent seismic/impact resistance and watertightness.		
	Mass	50.7~294.7kg	Conversion factor	-
	Applications	Primarily used for potable water distribution, agricultural irrigation, and industrial water supply.		
	TS*	Conforms to JIS G 5526, JWWA G 113, etc.		
Service life	Service life	Over 60 years		
	In-use conditions	Buried pipes in general soil environments		
	reference	Ministry of Land, Infrastructure, Transport and Tourism (Japan), "Reference Material: Examples of Setting Renewal Criteria"		
Manufacturing site(s)		Sakai Factory, Kurimoto, Ltd. (14-1 Ishizu Nishi-machi, Nishi-ku, Sakai, Osaka)		
Product description		Ductile iron pressure pipes (DN 75–250) primarily used for water mains, conveyance and transmission pipelines, agricultural irrigation, and industrial water supply.		
Website		https://www.kurimoto.co.jp/product/item/01/010.php		

* TS: technical specifications,

●Product Content

Product components	Propotion (%)	Mass (unit)
Ductile iron pipe (Ductile iron part)	≧ 9 9 %	–
Internal and external coatings	< 1 %	–
Packaging materials	Propotion (%)	Mass (unit)
Cap	100	–

●Biogenic Carbon Content

Item	Content (kg-C)	Content (kg-CO_2 eq)
Biogenic carbon content per product	0.00	0.00
Biogenic carbon content in packaging	0.00	0.00

●LCA-related Information

＞EPD Type Information

EPD type	Product type	■ Single product EPD	☐ Multiple products EPD	☐ Industry-wide EPD	
	Site type	■ Single site	☐ Multiple sites		
	Value	■ Specific	☐ Average	☐ Representative	☐ Worst case
Geographical coverage		Global			
Description of representativeness for multiple-products/sites EPD		Representativeness is considered to be ensured as the raw materials used per ton are identical across all products, all are manufactured at the same site in Japan, and the assessment is based on primary data collected for all raw material inputs and energy consumption.			
Description of variation for multiple-products/sites EPD		All products are manufactured at the same site under identical conditions regarding material and energy inputs per declared unit (1 ton). Consequently, variations in the calculation results for the relevant disclosure items fall within ±10%.			
Description of products covered in the multiple products EPD		This EPD discloses data converted to a per-ton basis for products with differing nominal diameters and joint types, all manufactured at the same site using identical materials and processes.			

＞LCA Information

★選択してください★		Per 1 ton		
Mass per declared unit (Conversion factor to mass)		—		
Reference flow (number of products required to fulfil the function)		—		
System boundary		■ Cradle-to-Gate	☐ Cradle-to-Gate with options	☐ Cradle-to-Grave
LCA software		MiLCA 3.2.0.0		
LCI database		IDEA 3.1		
Characterization model		Climate change: IPCC AR5 (IPCC, 2013) 100a, Other impact categories: LIME2		
Use of other background data		—		
Secondary data quality		Calculations were performed using data satisfying the secondary data quality prescribed in the GPI.		
Primary data collection sites		Sakai Factory, Kurimoto, Ltd.		
Primary data collection period		2024/04/01-2025/3/31		
Biogenic carbon		■ 0/0 approach	☐ -1/+1 approach	
Information about electricity	Use	■ Average consumption mix	☐ Others	
	Type	—		
	Purchase date	—		
	Issuing body	—		

＞Modules

Production stage			Construction stage		Use stage							End-of-life stage				Suppl. info
					Use					Operation						
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
Extraction and upstream production	Transport to factory	Manufacturing	Transport to site	Installation	Use	Maintenance	Repair	Replacement	Refurbishment	Operational energy use	Operational water use	De-construction / Demolition	Transport to waste processing or disposal	Waste processing	Disposal of waste	Potential net benefits
■	■	■	–	–	–	–	–	–	–	–	–	–	–	–	–	–

■ : declared module　– : module not declared

＞Allocation

No allocation

＞Cut-off rules

No cut-off

＞System Boundary

Defined based on the PCR.

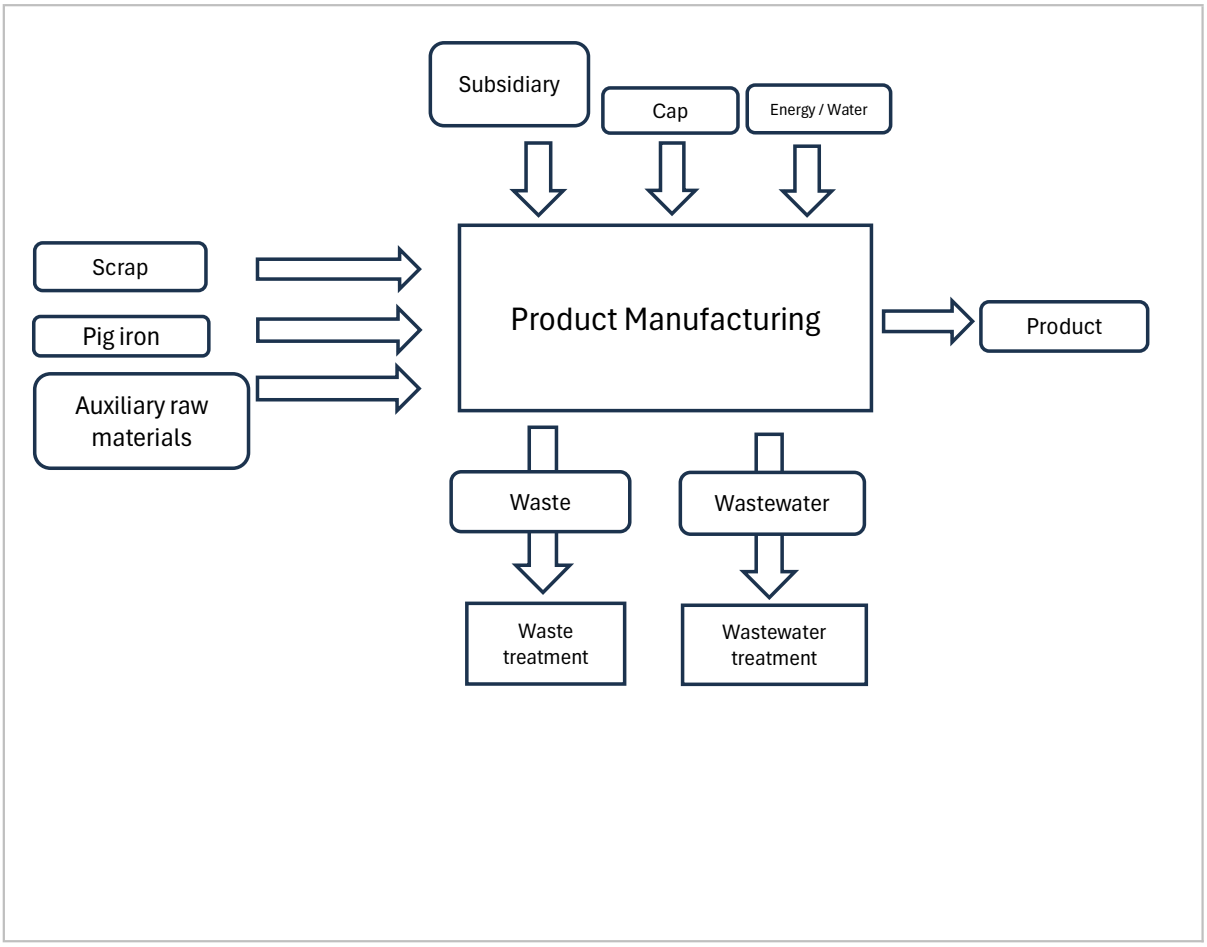
＞Scenario

Modules	Description
A2	For land transport to the factory, the PCR scenario is used for transport distance, truck tonnage, and load factor.
A3	For the transport of auxiliary materials and waste, the PCR scenario is used for transport distance, truck tonnage, and load factor.

＞Electricity Modelling

Data for the average Japanese grid electricity in 2018 was used.

＞Life Cycle Sytem Diagram



●LCA Result

＞LCIA Indicators

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage	D suppl. Info
GWP	kg-CO_2eq	4.26E+02	8.17E+01	1.17E+03	0.00E+00	0.00E+00	0.00E+00
Ozone layer depletion	kg-CFC-11eq	3.49E-05	1.09E-09	3.99E-04	0.00E+00	0.00E+00	0.00E+00
Acidification	kg-SO_2eq	5.22E-01	2.66E-01	1.06E+00	0.00E+00	0.00E+00	0.00E+00
Photochemical oxidants	kg-C_2H_4eq	8.94E-03	5.69E-04	9.44E-03	0.00E+00	0.00E+00	0.00E+00
Eutrophication	kg-PO_4^{3-}eq	1.46E-01	8.40E-10	8.69E-04	0.00E+00	0.00E+00	0.00E+00

＞LCI

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage	D suppl. Info
Use of non-renewable resources	kg	1.45E+02	8.17E-05	6.69E+01	0.00E+00	0.00E+00	0.00E+00
Use of non-renewable energy	MJ	6.81E+03	1.12E+03	1.65E+04	0.00E+00	0.00E+00	
Use of renewable resources	kg	5.29E+01	2.08E-05	1.03E+02	0.00E+00	0.00E+00	0.00E+00
Use of renewable energy	MJ	5.00E+02	2.83E-02	2.32E+03	0.00E+00	0.00E+00	0.00E+00
Consumption of freshwater resources	m^3	5.06E+00	1.66E-03	5.57E+00	0.00E+00	0.00E+00	

＞Waste Indicators

		Raw materials acquisition stage	Production stage	Distribution stage	Use stage	End of life stage	D suppl. Info
hazardous waste disposed	kg	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
non-hazardous waste disposed	kg	4.02E-01	7.07E-07	9.18E+00	0.00E+00	0.00E+00	
Municipal waste, landfill	kg	1.95E-09	1.14E-15	1.67E-10	0.00E+00	0.00E+00	
Industrial waste, landfill	kg	4.02E-01	7.07E-07	9.18E+00	0.00E+00	0.00E+00	

*It indicates the amount of waste generated throughout the lifecycle.

＞Description of LCA Results

- This calculation covers small-diameter straight pipes (including accessories).
- The primary data collection year is FY2024.
- For transport where the distance or mode was unknown, the PCR scenario was followed.
- The electricity intensity used is "Electricity, Japan average, FY2018".

●Additional Environmental Information

＞Additional Environmental Information not related to LCA

Manufactured at an ISO 14001 certified factory.

＞Information on Hazardous Substances

Hazardous materials name	CAS No.	Standards or regulations
–	–	–

Release of dangerous substances from construction products
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●Definitions of Terms

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●References

・ISO14025:2006 Environmental labels and declarations — Type III environmental declarations — Principles and procedures
・ISO14040:2006 Environmental management - Life Cycle Assessment - Principles and framework
・ISO14044:2006 Environmental management - Life Cycle Assessment - Requirements and guidelines
・ISO 21930:2007 Sustainability in building construction — Environmental declaration of building products

●Version History