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国际互认
环境信息
ENVIRONMENTAL INFORMATION
CNAS VV009-EI

Zhongtian Radio Frequency Cable Co., Ltd.

Organizational GHG Verification Report

Client: Zhongtian Radio Frequency Cable Co., Ltd.

Name of Verification Body: TÜV SÜD Certification and
(China) Co., Ltd.



Address of Verification Body: 5F, Communication Building, 163
Pingyun Rd, Huangpu Ave. West, Guangzhou 510656 P.R. China

Report No.: 704102501319 Rev.01

Date of issue: 2025-08-21

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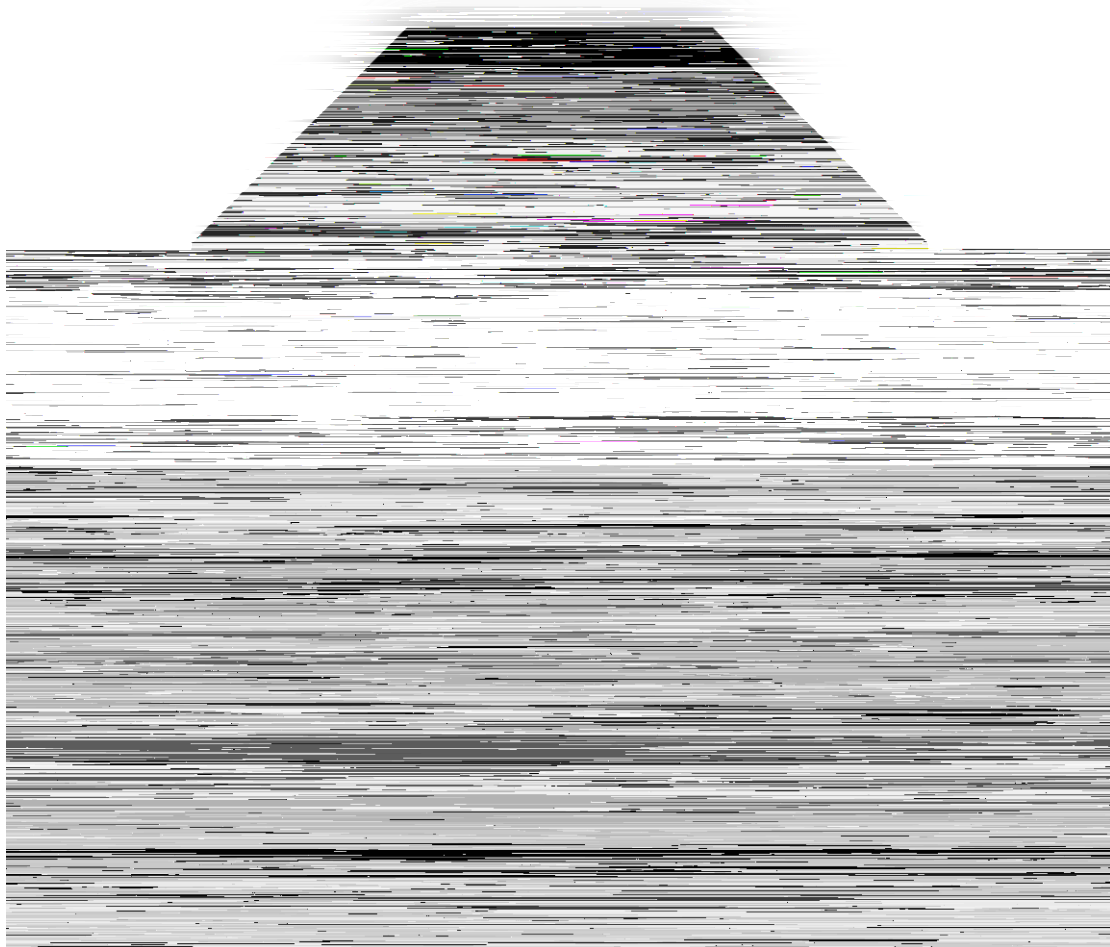
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Verification summary

Client	Zhongtian Radio Frequency Cable Co., Ltd.
Responsible Party.....	Zhongtian Radio Frequency Cable Co., Ltd.
Address of responsible party.....	No 105 Qixin Road, Economic & Technological Development Zone, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA 226010
Reporting period	2024-01-01~2024-12-31
Project started date.....	2025-02-17
Declaration of Responsible party	Claim Content: The total GHG emissions of Zhongtian Radio Frequency Cable Co., Ltd. at the organizational level in 2024-01-01~2024-12-31 in organizational boundary and reporting boundary are 499211.0385 tCO _{2e} . Claim Date: 2025-01-14
Verification standard.....	<input checked="" type="checkbox"/> ISO 14064-1:2018 <i>Greenhouse gases – Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals</i> <input checked="" type="checkbox"/> ISO 14064-3:2019 <i>Greenhouse gases – Part 3: Specification with guidance for the verification and validation of greenhouse gas statements</i>
Implementation rules.....	CCB_GHG_GR_002CS V5
Organizational boundaries.....	Activities and facilities within No 105 Qixin Road, Economic & Technological Development Zone, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA, No 1 Tianchi Road, Hekou Town, Rudong, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA, Second Floor of Office Building 3, Zhongtian Industrial Park, Hekou Town, Rudong, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
Consolidation approach:	<input type="checkbox"/> Financial control <input checked="" type="checkbox"/> Operational control <input type="checkbox"/> Equity share
Level of assurance.....	<input checked="" type="checkbox"/> Reasonable <input type="checkbox"/> Limited
Material discrepancy.....	Within 5% of total emissions across organizational boundaries
Related Industrial Category	A02 General Manufacturing (A2.6 Computer, communications and other electronic equipment manufacturing)
Reporting boundary	<input checked="" type="checkbox"/> Category 1: direct GHG emissions and removals <input checked="" type="checkbox"/> Category 2: indirect GHG emissions from imported energy <input checked="" type="checkbox"/> Category 3: indirect GHG emissions from transportation

Category 4:



1. Summary

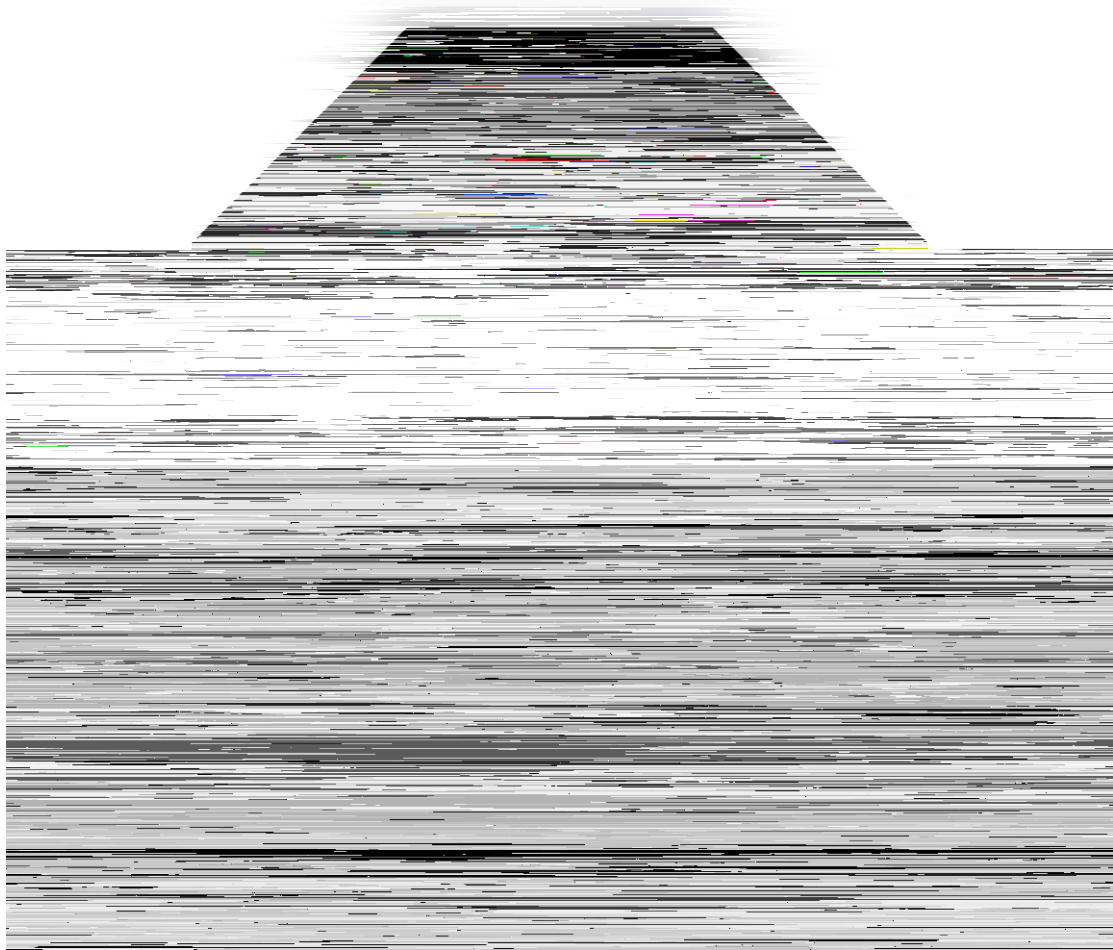
Background

TÜV SÜD Certification and Testing (China) Co., Ltd. Guangzhou Branch (hereinafter referred to as TÜV SÜD) was commissioned by Zhongtian Radio Frequency Cable Co., Ltd. to verify GHG emission. Between 2025-02-17~2025-05-12, TÜV SÜD auditor Johny Wang and Tony Sun conducted the carbon verification activities of the responsible party to evaluate the conformity of GHG related verification specification for the organization, including the principles and requirements of the standards or GHG scheme that applied to the verification Category.

Verification conclusion

After verification, TÜV SÜD Certification and Testing (China) Co., Ltd. reached conclusions as below:

- 1) The Organization's GHG emissions verification verifies claims made by responsible party in accordance with standard ISO 14064-3:2019
- 2) GHG-related activity, GHG claim, responsible party and criteria used to compile and assess the





our commitment to the society and employees' health, safety and environment, and adhere to the resource-saving and environment-friendly road.
Responsible Party Greenhouse Gas Claim (Self-declaration)
The total GHG emissions of Zhongtian Radio Frequency Cable Co., Ltd. at the organizational level in 2024-01-01~2024-12-31 in organizational boundary and reporting boundary are 499211.0385 tCO _{2e} .
Level of assurance
<input checked="" type="checkbox"/> Reasonable assurance <input type="checkbox"/> Limited assurance
Verification purpose
<input checked="" type="checkbox"/> Verify the accuracy and conformity claimed by the responsible party according to the verification criteria. <input checked="" type="checkbox"/> Provide independent evaluation of relevant information through objective evidence, including whether the information in GHG reporting meets the principles of relevance, completeness, consistency, accuracy, and transparency; Whether there are material errors and omissions in the reported data results; Whether the level of assurance provided is met. <input type="checkbox"/> Others:
Verification Standard
<input checked="" type="checkbox"/> ISO 14064-1:2018 <i>Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.</i> <input checked="" type="checkbox"/> ISO 14064-3:2019 <i>Greenhouse gases — Part 3: Specification with guidance for the verification and validation of greenhouse gas statements.</i>
Verification Category
Organizational boundary Under <input type="checkbox"/> Financial control / <input checked="" type="checkbox"/> Operational control/ <input type="checkbox"/> Equity share



Quantified emission source attributes	<input checked="" type="checkbox"/> Non-biogenic GHG emissions and removals <input checked="" type="checkbox"/> Anthropogenic biogenic CO ₂ emissions and removals <input checked="" type="checkbox"/> Anthropogenic biogenic emissions and removals of other GHGs <input type="checkbox"/> Non-anthropogenic biogenic GHG emissions and removals
Facilities, physical infrastructure, activities, technologies, and processes	Manufacture and sale of RF coaxial cables, leaky coaxial cables, symmetrical communication cables, signal cables, control cables, high-temperature coaxial cables, high-temperature wires & cables, hybrid fiber-optical cables (composite cables), flexible waveguide feeders (flexible waveguide lines), flexible waveguide leaky cables (flexible waveguide leaky lines), communication network cable, connectors, jumper assemblies, harness assemblies, lightning arresters, feeder clamps and matching accessories.
GHG SSRs	All the facilities of the responsible party contributing to GHG emissions within the reporting boundary
Types of GHGs	<input checked="" type="checkbox"/> CO ₂ <input checked="" type="checkbox"/> CH ₄ <input checked="" type="checkbox"/> N ₂ O <input checked="" type="checkbox"/> HFCs <input checked="" type="checkbox"/> PFCs <input checked="" type="checkbox"/> SF ₆ <input checked="" type="checkbox"/> NF ₃
Time Boundary	2024-01-01-2024-12-31

Materiality thresholds

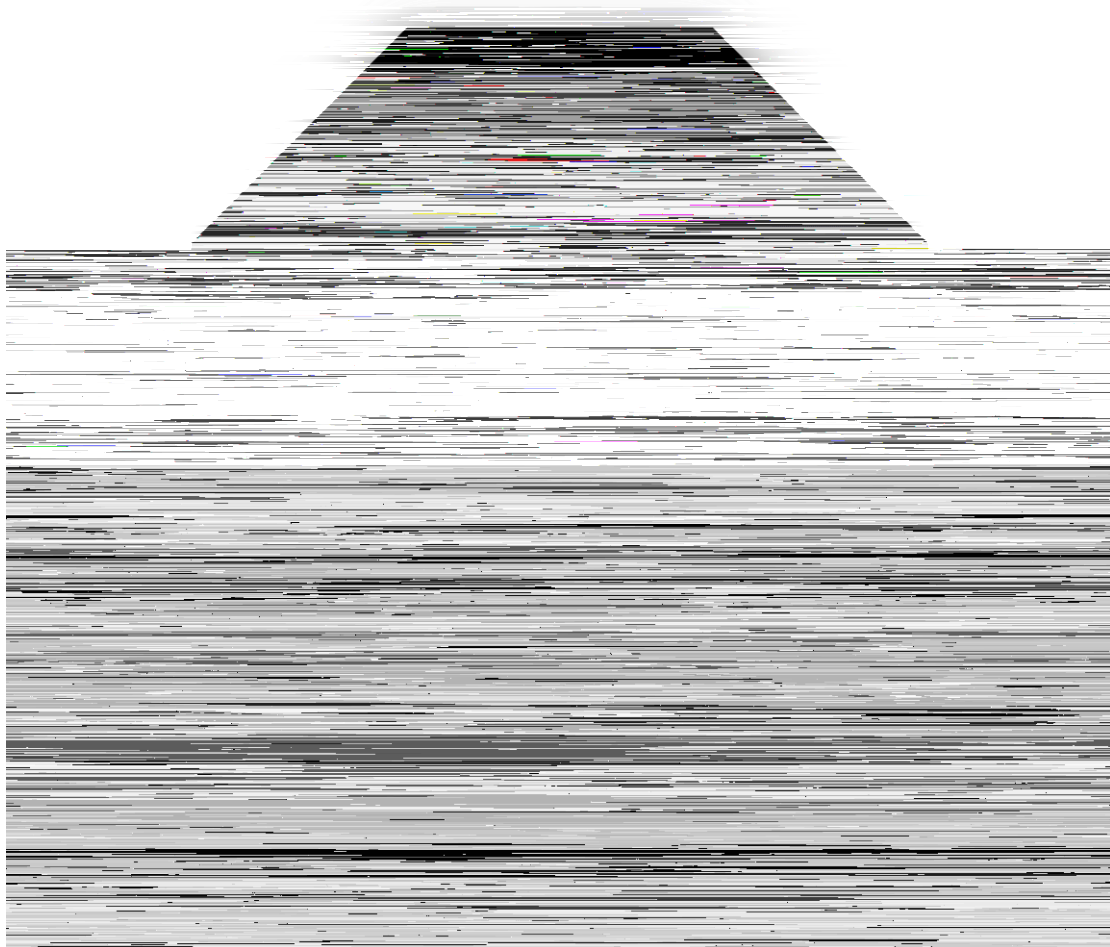
The numerical error of the GHG claim is within 5%, and the deviation of the GHG claim does not affect its reliability and the decision of the intended user based on the claim.

2.2. Verification arrangement

Verification team	
Name	Role
Johny Wang	Team leader
Tony Sun	Team member
Observers: /	Other personnel (observers, interns/trainees, external assessors, etc.)
Interns / trainees: /	
External auditors: /	
Verification schedule	
Date	Work content
2025-03-10~2025-03-11	Documents review
2025-04-07~2025-04-08	Site visit
2025-08-20	Verification report writing
2025-08-21	Issue of verification report

are collected for verification, and 92.86% of cross-check data sources are sampled. In summary, the verification results can meet the requirements of assurance level and materiality threshold.

Evidence-gathering





2025-04-07~2025-04-08	<ul style="list-style-type: none"> - Inspect whether the main energy consumption equipment and facilities and energy measurement system of the enterprise meet the requirement of GHG quantification
2025-04-07~2025-04-08	<ul style="list-style-type: none"> - Collation of data sources, metrological verification, and cross check evidence - Internal evaluation and review of GHG quantification methods - Record and save of GHG documents
2025-04-07~2025-04-08	<ul style="list-style-type: none"> - Verification standard - GHG emission boundary - GHG control procedures of the verified party - Contents of GHG inventory report - Determine the conformity of calculation method and emission factor - Material discrepancy of GHG claim of enterprise

3. Verification findings

3.1. Assessment of GHG information system and its control

Assessment of GHG information system and its control
<p>The energy consumption data records of the enterprise are complete, and the data statistics and settlement meet the national laws and regulations and industry settlement requirements. The verification team cross checked the corresponding invoice data and found that the energy activity level data provided by the enterprise was accurate and reliable.</p>
<p>The responsible party's electricity consumption data is obtained from the electricity invoice provided by the power company, which calibrates the meter. The rest, such as diesel purchase record, refrigerant filling amount, transported materials, etc., comes from the weight provided by the supplier, and the weighing equipment is calibrated by the supplier. The weight data of the waste is derived from the company's weighbridge and is calibrated.</p>
<p>Responsible party Greenhouse gas management is the responsibility of the quality department. The responsibilities and terms of reference of the GHG Panel are described below:</p> <ul style="list-style-type: none"> - Top management: responsible for the establishment of the company's greenhouse gas team, the appointment of greenhouse gas representatives, the provision of resources for greenhouse gas inventory verification, the reporting of greenhouse gas management performance to the Group company, and the person responsible for the greenhouse gas report issued by the company. - Greenhouse Gas Representative: The head of Operations is responsible for organizing the greenhouse gas team to conduct inventory work, responsible for reporting the status and results of

greenhouse gas inventory and verification to top management and is the designated window for internal and external communication.

- Greenhouse gas authority: responsible for summarizing the level of activity data related to greenhouse gas inventory and verification, and responsible for the establishment of the Company's inventory and the preparation of reports; Responsible for the company's inventory information management, greenhouse gas inventory and verification of documents and records management and archiving.

The responsibilities of the Equipment Department are as follows:

-Responsible for recording power meter reading data of station area, daily meter reading, monthly summary, and providing to the competent department of greenhouse gas.

-Responsible for recording the refrigerant filling data of air conditioning in the station area, summarizing it annually and providing it to the competent department of greenhouse gas.

- Responsible for the filling data records of the transformer in the station area, annual summary, and provide to the greenhouse gas authorities

-Responsible for counting the number of workers in the factory and the average monthly working hours and providing monthly summary to the competent department of greenhouse gases.

Through document review and on-site visit, the verification team checked the raw documents of activity level data required for greenhouse gas accounting and interviewed on-site staff and representatives of relevant management departments. The internal data collection and statistical management system of the enterprise was effective.


3.2. Assessment of GHG data and information

Activity data and emission factor compliance

The verification team verified each activity data in the enterprise greenhouse gas emission report submitted by the enterprise. The verification included the values, units and sources of activity data, the values and sources of emission factors, and the GHG emission processes.

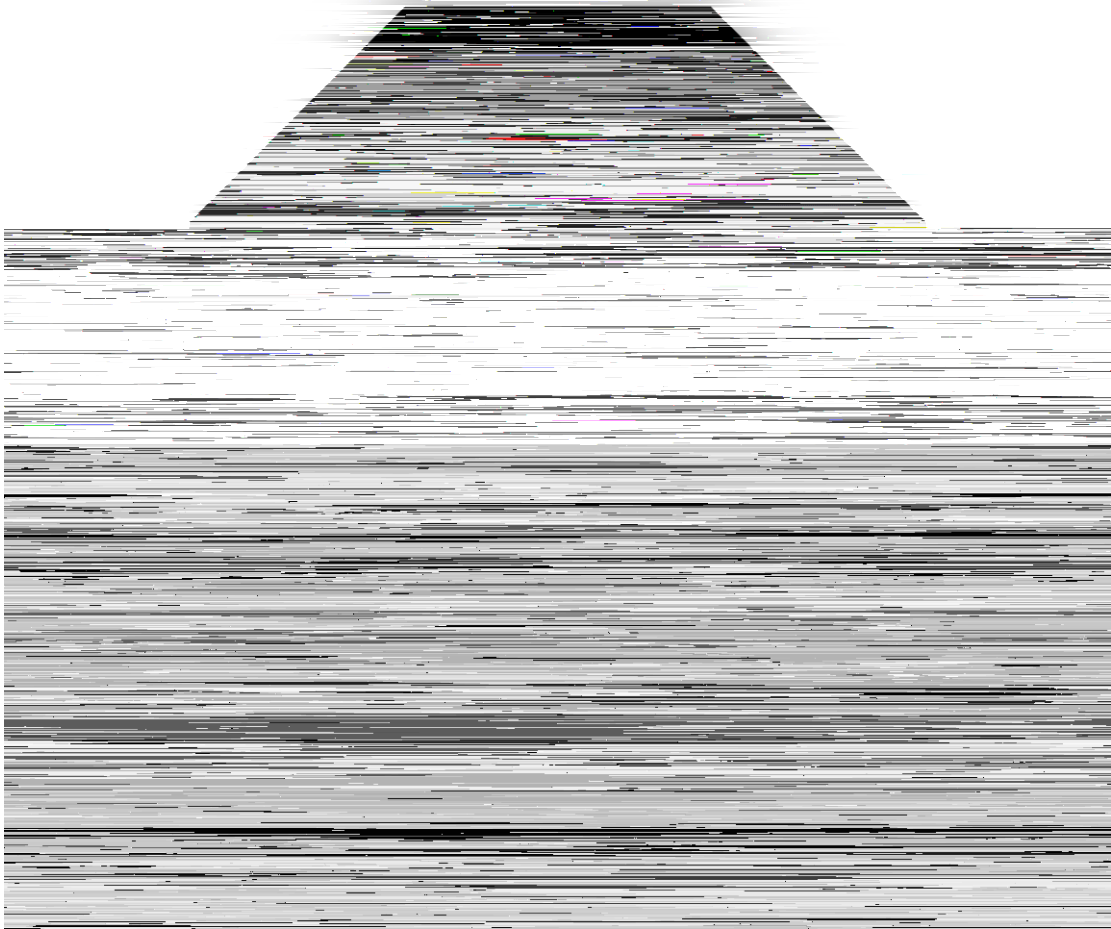
The verification information are as follows:

Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data
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Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Propane	Propane combustion	Direct emission <input type="checkbox"/> Emission factor method <input checked="" type="checkbox"/> Mass balance method <input type="checkbox"/> Measurement method	546.00	kg	Raw material acquisition record	3.0000 kgCO ₂ /kg		1.6380
	Methane	Methane combustion	Direct emission <input type="checkbox"/> Emission factor method <input checked="" type="checkbox"/> Mass balance method <input type="checkbox"/> Measurement method	3.72	kg	Raw material acquisition record	2.7500 kgCO ₂ /kg		0.0102
	R32	Air conditioning	Direct emission <input checked="" type="checkbox"/> Emission factor method <input type="checkbox"/> Mass balance method <input type="checkbox"/> Measurement method	41.30	kg	Quantity and the nameplate of air conditioners	Fugitive factor: 5.5%	2006 IPCC Guidelines for National Greenhouse Gas Inventories Table 7.9, Chapter VII, volume III	1.7513





Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Carbon dioxide	Gas usage	Direct emission <input type="checkbox"/> Emission factor method <input checked="" type="checkbox"/> Mass balance method <input type="checkbox"/> Measurement method	44462.60	kg	Raw material acquisition record	1.0000 kgCO ₂ /kg		44.4626
	Septic-tank	Septic-tank	Direct emission <input checked="" type="checkbox"/> Emission factor method <input type="checkbox"/> Mass balance method <input type="checkbox"/> Measurement method	531	person	Number of employees in the plant area and enterprise roster	BOD individual production: 40 g/person/day Maximum CH ₄ production capacity (BO): 0.6 kgCH ₄ /kgBOD CH ₄ (MCF): 0.5	2006 IPCC Guidelines for National Greenhouse Gas Inventories Table 6.2, Table 6.3 and Table 6.4, Chapter VI, volume V	64.8893
Category 2: indirect GHG emissions from imported energy	Imported electricity	Grid electricity	Electricity and heat: <input checked="" type="checkbox"/> Location-based method <input type="checkbox"/> Market-based method	13945364.75	kWh	Enterprise's power statistics	0.5366 kgCO ₂ /kWh	2022 National Grid Average CO ₂ Emission Factor	7483.0827



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Imported electricity	Zhongtian Photovoltaic Technology Co., Ltd. sourced electricity	Electricity and heat: <input checked="" type="checkbox"/> Location-based method <input type="checkbox"/> Market-based method	1997920.00	kWh	Enterprise's power statistics	0.0000 kgCO ₂ /kWh		0.0000
	Imported electricity	Rooftop photovoltaic electricity	Electricity and heat: <input checked="" type="checkbox"/> Location-based method <input type="checkbox"/> Market-based method	579867.00	kWh	Enterprise's power statistics	0.0000 kgCO ₂ /kWh		0.0000
Category 3: indirect GHG emissions from transportation	Employee commuting vehicle	Outsourcing vehicle	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	446277.60	km	Employee commuting statistics	0.3632 kgCO ₂ e/km	Ecoinvent 3.10 database	162.0829



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Employee commuting electric vehicle	Outsourcing electric vehicle	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	287217.00	pkm	Employee commuting statistics	0.2391 kgCO ₂ e/pkm	Ecoinvent 3.10 database	68.6778
	Employee commuting electric bike	Outsourcing electric bike	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	241413.60	km	Employee commuting statistics	0.0270 kgCO ₂ e/km	Ecoinvent 3.10 database	6.5222



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Employee taxi traveling	Taxi traveling	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1110.00	pkm	Employee traveling compensate record	0.3632 kgCO ₂ e/km	Ecoinvent 3.10 database	0.4031
	Employee plane traveling	Plane traveling	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	159935.00	pkm	Employee traveling compensate record	0.1099 kgCO ₂ e/pkm	Ecoinvent 3.10 database	17.5831



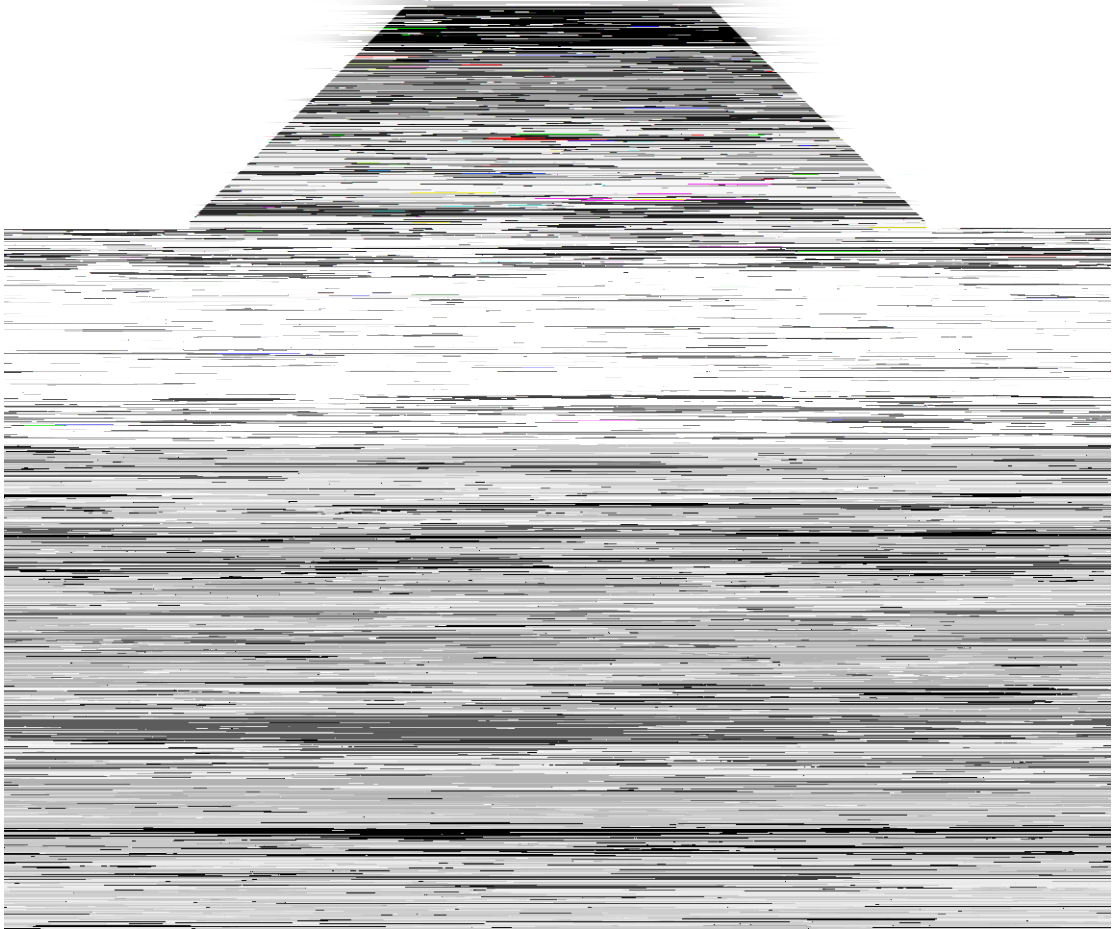
Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Employee rail traveling	Rail traveling	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	130566.00	pkm	Employee traveling compensate record	0.0749 kgCO ₂ e/pkm	Ecoinvent 3.10 database	9.7753
	Employee subway traveling	Subway traveling	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	360.00	pkm	Employee traveling compensate record	0.000032 kgCO ₂ e/pkm	Notice of the Beijing Municipal Ecology and Environment Bureau on Effectively Managing Carbon Emission Entities and Piloting Carbon Emission Trading in the Municipality for 2024	0.000012



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Employee bus traveling	Bus traveling	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	270.00	pkm	Employee traveling compensate record	0.1202 kgCO ₂ e/pkm	Ecoinvent 3.10 database	0.0324
	Upstream material transportation	Upstream material road transportation <3.5t	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	658086.31	tkm	Raw material acquisition record	2.1172 kgCO ₂ e/tkm	Ecoinvent 3.10 database	1393.3173



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Upstream material transportation	Upstream material road transportation 3.5t-16t	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	5317580.13	tkm	Raw material acquisition record	0.2451 kgCO ₂ e/tkm	Ecoinvent 3.10 database	1303.2020
	Upstream material transportation	Upstream material road transportation 16t-32t	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	11788821.73	tkm	Raw material acquisition record	0.1940 kgCO ₂ e/tkm	Ecoinvent 3.10 database	2287.1907





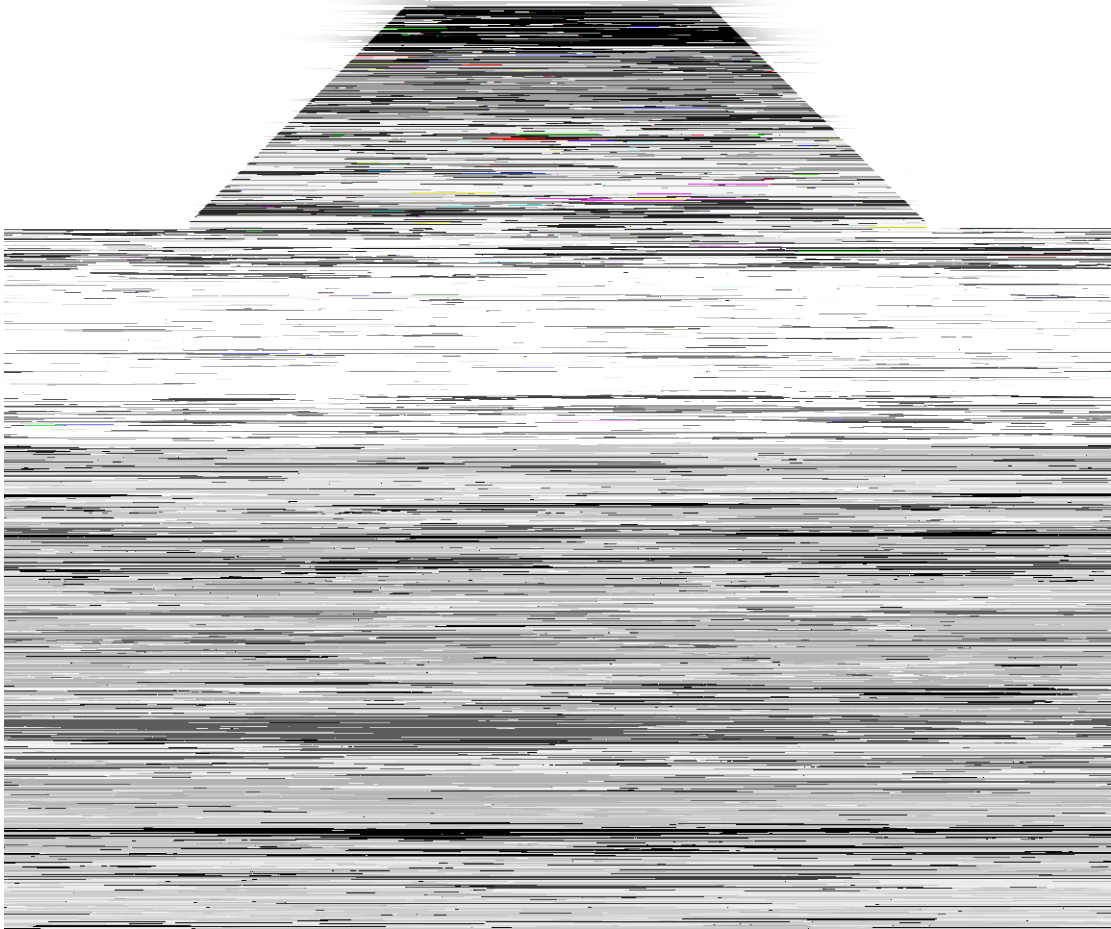
Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Downstream material transportation	Downstream material road transportation <3.5t	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	5076269.27	tkm	2024 sales record	2.1172 kgCO ₂ e/tkm	Ecoinvent 3.10 database	10747.6085
	Downstream material transportation	Downstream material road transportation 3.5t-16t	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	12748561.02	tkm	2024 sales record	0.2451 kgCO ₂ e/tkm	Ecoinvent 3.10 database	3124.3441

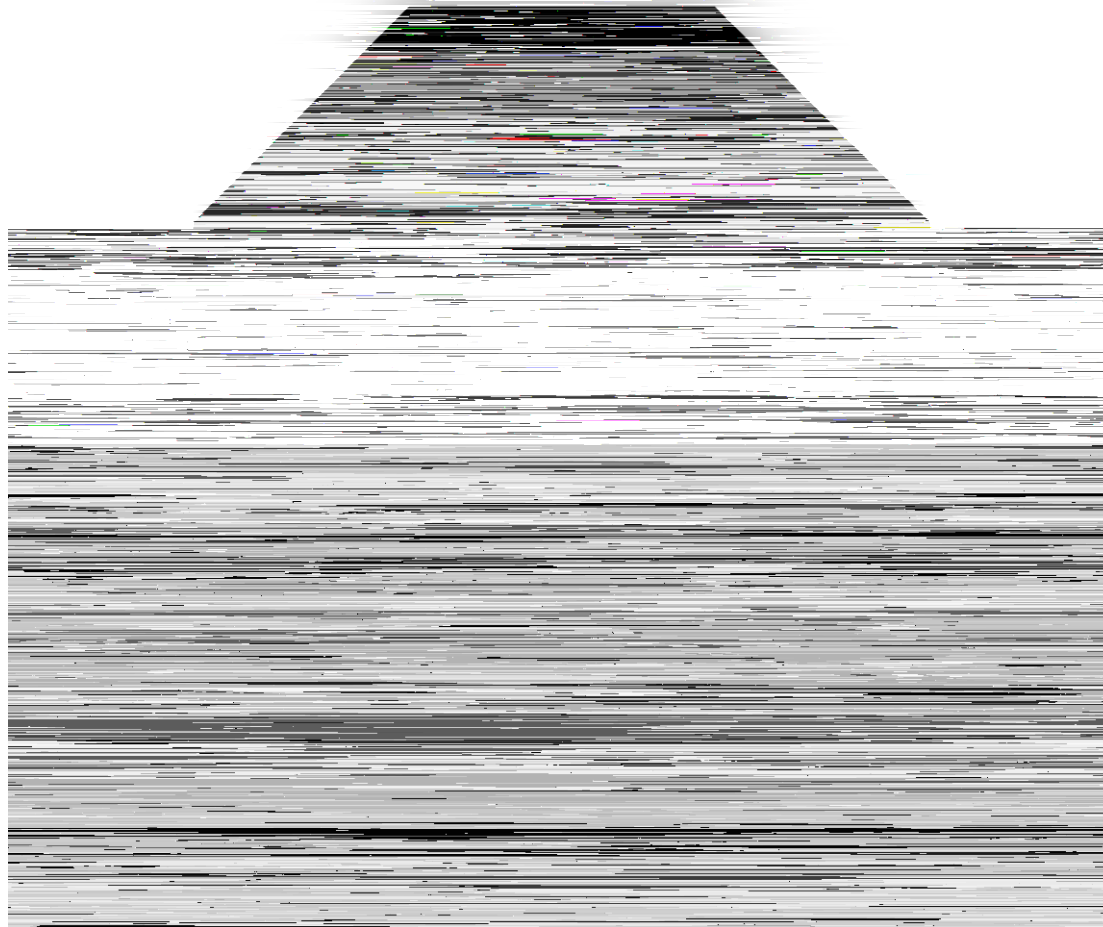


Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Downstream material transportation	Downstream material road transportation 16t-32t	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	14234501.04	tkm	2024 sales record	0.1940 kgCO ₂ e/tkm	Ecoinvent 3.10 database	2761.6855
			Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	14438641.30	tkm	2024 sales record	0.1070 kgCO ₂ e/tkm	Ecoinvent 3.10 database	1544.3551

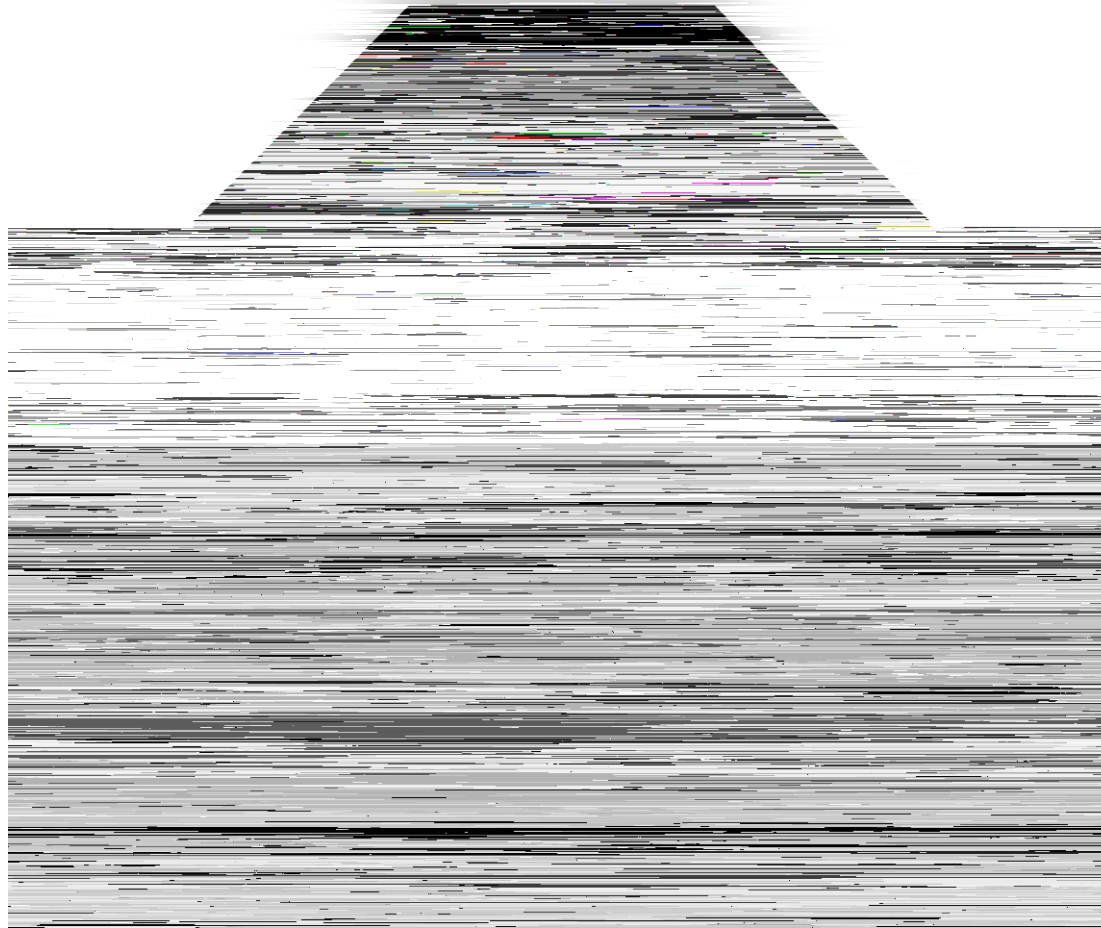


Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
Category 4: indirect GHG emissions from products used by organization	Production equipment	Production equipment cost	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input type="checkbox"/> Average-data method <input checked="" type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1275.43	Ten thousand RMB	Stationary equipment record	1.9524 tCO ₂ e/ten thousand RMB	Chinese Environmentally Extended Input-Output database adjusted by 2024 PPI	2490.1583
	Office equipment	Computer	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	54.67	p	2024 office equipment record	596.5844 kgCO ₂ e/p	Ecoinvent 3.10 database	32.6133





Emission categories	Emission source	Facilities or process
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Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	ABS product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not...						



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	EAA material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	9650.00	kg	Raw material acquisition record	3.7261 kgCO ₂ e/kg	Ecoinvent 3.10 database	35.9571
	Purchased raw material	FEP material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	69023.60	kg	Raw material acquisition record	2.9196 kgCO ₂ e/kg	Ecoinvent 3.10 database	201.5201



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	HDPE material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	3667814.00	kg	Raw material acquisition record	3.1562 kgCO ₂ e/kg	Ecoinvent 3.10 database	11576.4465
	Purchased raw material	LDPE material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	889645.00	kg	Raw material acquisition record	3.3465 kgCO ₂ e/kg	Ecoinvent 3.10 database	2977.1738



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	PE tape	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	757.89	kg	Raw material acquisition record	4.0027 kgCO ₂ e/kg	Ecoinvent 3.10 database	3.0336
	Purchased raw material	EPE foam	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	10464.20	kg	Raw material acquisition record	4.2752 kgCO ₂ e/kg	Ecoinvent 3.10 database	44.7369



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	LDPE product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	87543.00	kg	Raw material acquisition record	4.8645 kgCO ₂ e/kg	Ecoinvent 3.10 database	425.8521
	Purchased raw material	LLDPE material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1244632.00	kg	Raw material acquisition record	3.0754 kgCO ₂ e/kg	Ecoinvent 3.10 database	3827.7994



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	PA66 product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	998815.97	kg	Raw material acquisition record	9.7477 kgCO ₂ e/kg	Ecoinvent 3.10 database	9736.1572
	Purchased raw material	PET material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	14411.47	kg	Raw material acquisition record	3.9638 kgCO ₂ e/kg	Ecoinvent 3.10 database	57.1243



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	PET product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	78992.55	kg	Raw material acquisition record	4.6200 kgCO ₂ e/kg	Ecoinvent 3.10 database	364.9446
	Purchased raw material	PE film	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	138910.12	kg	Raw material acquisition record	3.8907 kgCO ₂ e/kg	Ecoinvent 3.10 database	540.4540



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	PFA material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	125.00	kg	Raw material acquisition record	142.9938 kgCO ₂ e/kg	Ecoinvent 3.10 database	17.8742
	Purchased raw material	PO material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	2125489	kg	Raw material acquisition record	2.5188 kgCO ₂ e/kg	Ecoinvent 3.10 database	5353.7377



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	PP material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	96628.5	kg	Raw material acquisition record	3.6789 kgCO ₂ e/kg	Ecoinvent 3.10 database	355.4863
	Purchased raw material	PP plastic strip	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	656.62	kg	Raw material acquisition record	4.3351 kgCO ₂ e/kg	Ecoinvent 3.10 database	2.8465



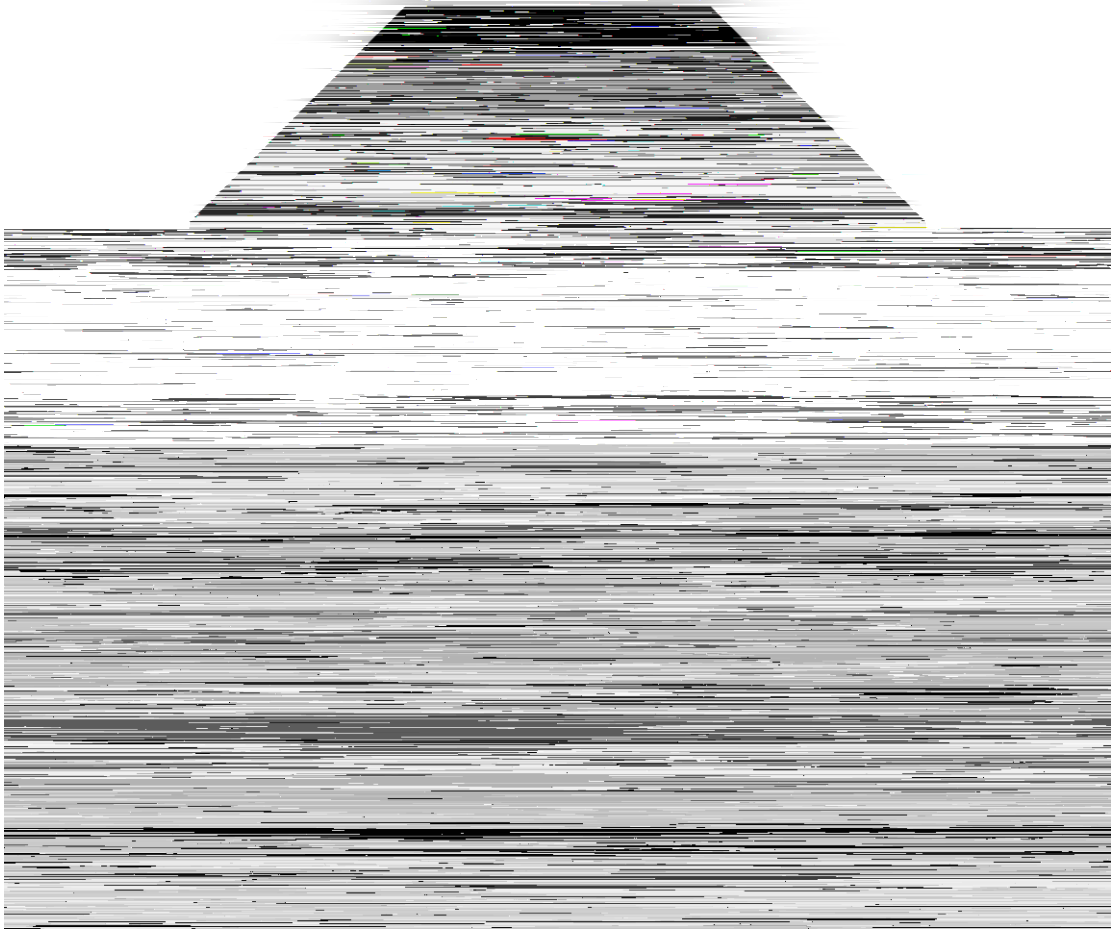
Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	PP product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	40526.97	kg	Raw material acquisition record	5.1969 kgCO ₂ e/kg	Ecoinvent 3.10 database	210.6151
	Purchased raw material	PTFE material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	151885.00	kg	Raw material acquisition record	142.9938 kgCO ₂ e/kg	Ecoinvent 3.10 database	21718.6158



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	PTFE product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	684.27	kg	Raw material acquisition record	143.6500 kgCO ₂ e/kg	Ecoinvent 3.10 database	98.2954
	Purchased raw material	PVC material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	717139.00	kg	Raw material acquisition record	2.9577 kgCO ₂ e/kg	Ecoinvent 3.10 database	2121.0542



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Propane	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	546.00	kg	Raw material acquisition record	1.0829 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.5913
	Purchased raw material	Glass fiber material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	2162.20	kg	Raw material acquisition record	4.1751 kgCO ₂ e/kg	Ecoinvent 3.10 database	9.0274





Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Aluminum product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1529.60	kg	Raw material acquisition record	27.8737 kgCO ₂ e/kg	Ecoinvent 3.10 database	42.6357
	Purchased raw material	Aluminum strip	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1719585.50	kg	Raw material acquisition record	24.2488 kgCO ₂ e/kg	Ecoinvent 3.10 database	41697.9448



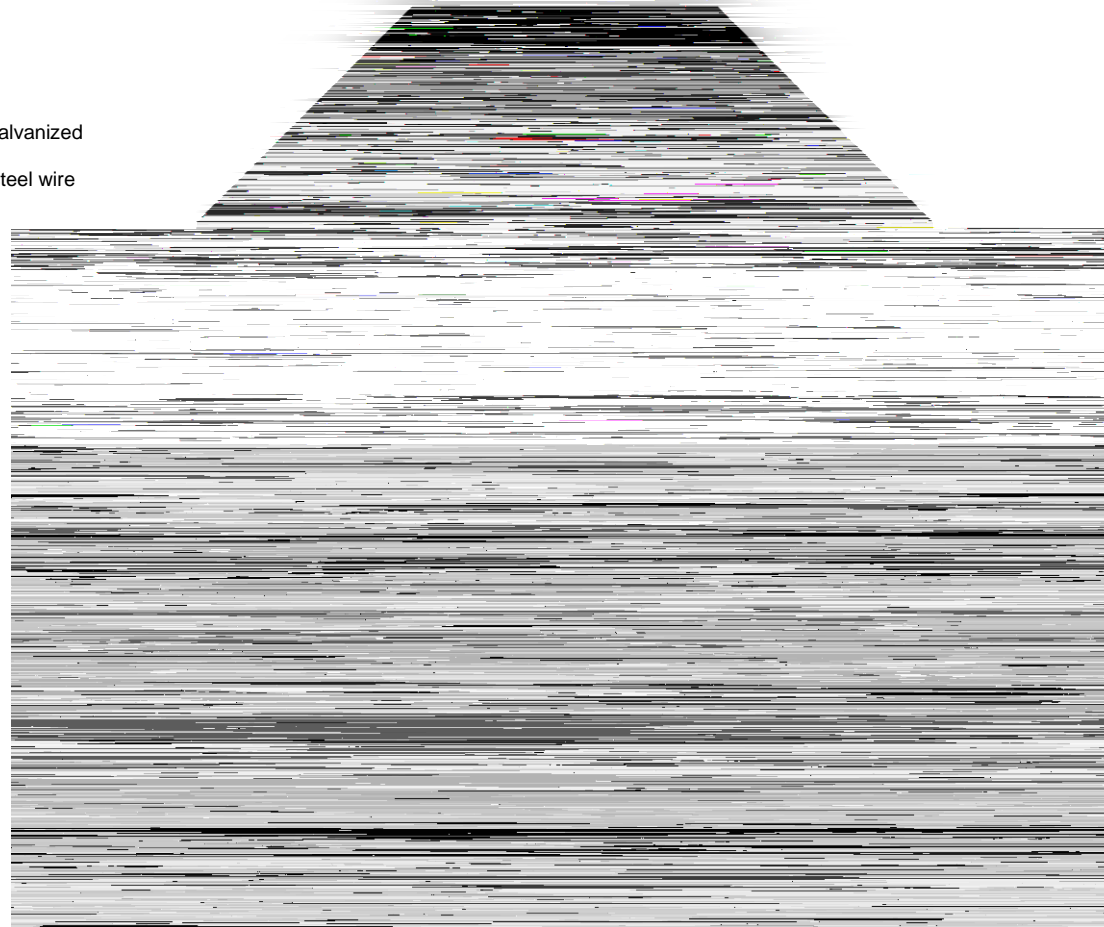
Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Nitrogen gas	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	15856.25	kg	Raw material acquisition record	0.4471 kgCO ₂ e/kg	Ecoinvent 3.10 database	7.0891
	Purchased raw material	Galvanized steel strip	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	3095481.00	kg	Raw material acquisition record	3.0112 kgCO ₂ e/kg	Ecoinvent 3.10 database	9321.1004



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
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€Goods, services and eel

Purchased Galvanized
 raw material steel wire





Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Power supply	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	825.00	kg	Raw material acquisition record	14.2176 kgCO ₂ e/kg	Ecoinvent 3.10 database	11.7295
	Purchased raw material	Resistor	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1197.18	kg	Raw material acquisition record	29.0619 kgCO ₂ e/kg	Ecoinvent 3.10 database	34.7923



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Optical fiber	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	4157.03	kg	Raw material acquisition record	9.5412 kgCO ₂ e/kg	Ecoinvent 3.10 database	39.6629
	Purchased raw material	Carbon dioxide	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	44462.60	kg	Raw material acquisition record	0.9001 kgCO ₂ e/kg	Ecoinvent 3.10 database	40.0224

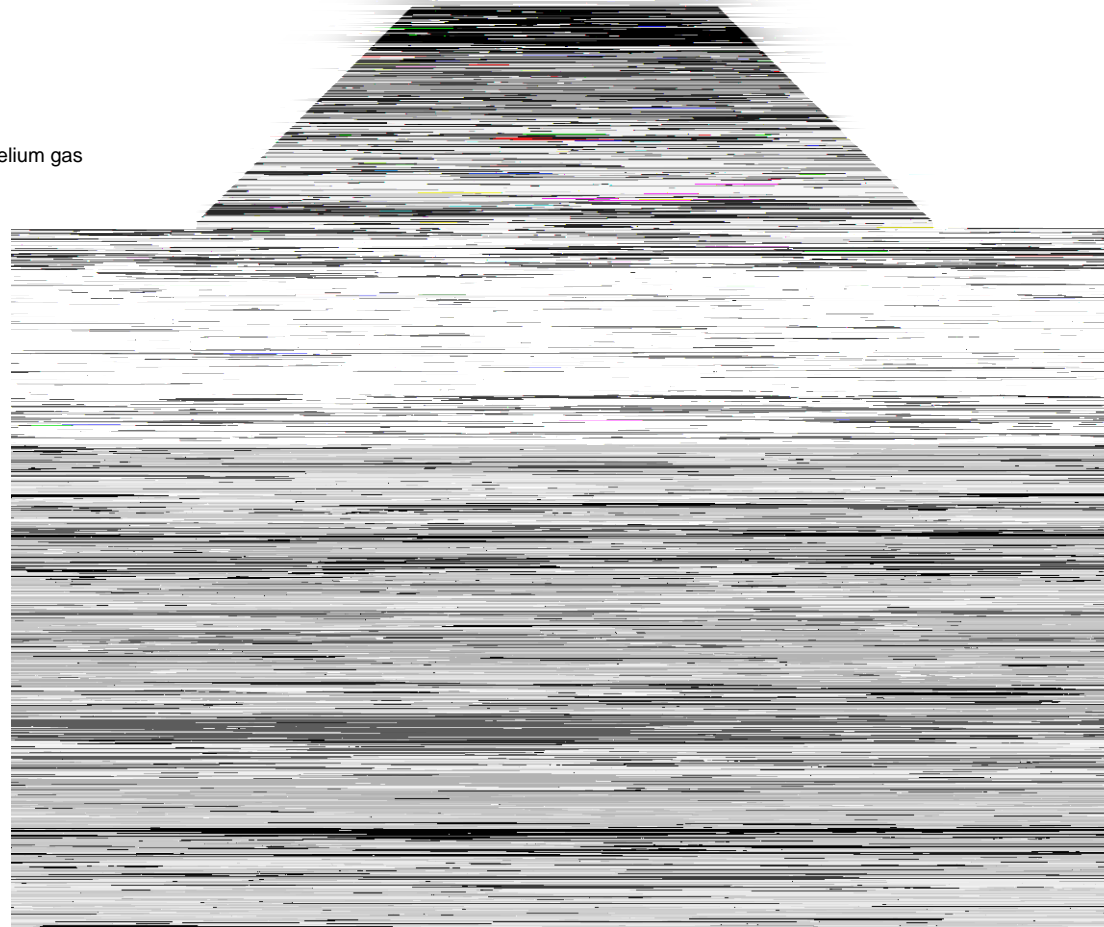


Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
			Goods, services and capital goods:						
			<input type="checkbox"/> Supplier-specific method						
	Purchased raw material	Silicone product	<input type="checkbox"/> Hybrid method	196.00	kg	Raw material acquisition record	3.6255 kgCO ₂		
			<input checked="" type="checkbox"/> Average data method						
			<input type="checkbox"/> Spend-based method						
			<input type="checkbox"/> Not applicable						

Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
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Purchased raw material

Helium gas





Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Chemicals	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	2685.88	kg	Raw material acquisition record	2.8670 kgCO ₂ e/kg	Ecoinvent 3.10 database	7.7005
	Purchased raw material	Brass material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	2.81	kg	Raw material acquisition record	2.8670 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0163



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Brass product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable						



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Brass wire	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	474325.87	kg	Raw material acquisition record	6.5887 kgCO ₂ e/kg	Ecoinvent 3.10 database	3125.1957
	Purchased raw material	Methane	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	3.72	kg	Raw material acquisition record	1.3774 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0051



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Plywood	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1126963.00	kg	Raw material acquisition record	0.8998 kgCO ₂ e/kg	Ecoinvent 3.10 database	1014.0485
	Purchased raw material	Metal processing	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	14161.02	kg	Raw material acquisition record	4.3206 kgCO ₂ e/kg	Ecoinvent 3.10 database	61.1840



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Poly olefin material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1160.00	kg	Raw material acquisition record	2.5188 kgCO ₂ e/kg	Ecoinvent 3.10 database	2.9218
	Purchased raw material	Aluminum alloy product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	3000.00	kg	Raw material acquisition record	12.0843 kgCO ₂ e/kg	Ecoinvent 3.10 database	36.2528



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Wood pallet	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	3314660.00	kg	Raw material acquisition record	0.3291 kgCO ₂ e/kg	Ecoinvent 3.10 database	1090.6983
	Purchased raw material	Nylon material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	110.30	kg	Raw material acquisition record	8.2297 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.9077



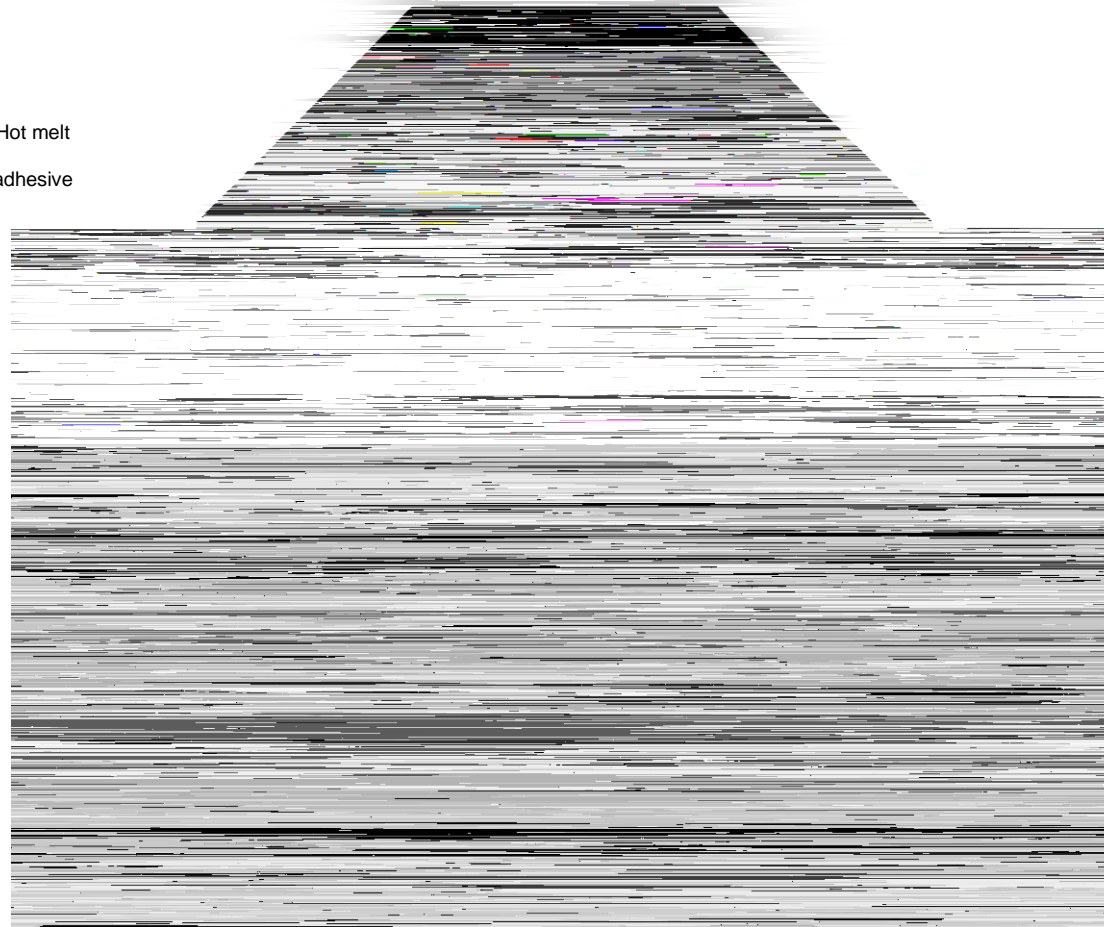
Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Nylon product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	206.67	kg	Raw material acquisition record	8.8859 kgCO ₂ e/kg	Ecoinvent 3.10 database	1.8364
	Purchased raw material	Kraft paper	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	491996.40	kg	Raw material acquisition record	0.9620 kgCO ₂ e/kg	Ecoinvent 3.10 database	473.3058



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
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Purchased raw material
 Hot melt adhesive





Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Wood product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	610.00	kg	Raw material acquisition record	0.1093 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0667
	Purchased raw material								



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Carbon steel strip	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	4280.00	kg	Raw material acquisition record	2.3472 kgCO ₂ e/kg	Ecoinvent 3.10 database	10.0459
	Purchased raw material	Carbon steel wire	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	111882.40	kg	Raw material acquisition record	2.3126 kgCO ₂ e/kg	Ecoinvent 3.10 database	258.7444



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Carbon steel product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	7463.65	kg	Raw material acquisition record	4.2298 kgCO ₂ e/kg	Ecoinvent 3.10 database	31.5697
	Purchased raw material	Steel-copper wire	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	3114.63	kg	Raw material acquisition record	3.7897 kgCO ₂ e/kg	Ecoinvent 3.10 database	11.8036



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Steel-aluminum wire	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	2456593.70	kg	Raw material acquisition record	21.0049 kgCO ₂ e/kg	Ecoinvent 3.10 database	51600.4997
	Purchased raw material	aluminum magnesium wire	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1309.05	kg	Raw material acquisition record	8.7365 kgCO ₂ e/kg	Ecoinvent 3.10 database	11.4365



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Corrugated board	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	203175.50	kg	Raw material acquisition record	1.2765 kgCO ₂ e/kg	Ecoinvent 3.10 database	259.3501
	Purchased raw material	Cable connector							



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Passive electronic component	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	140676.87	kg	Raw material acquisition record	63.7453 kgCO ₂ e/kg	Ecoinvent 3.10 database	8967.4962
	Purchased raw material	Solder material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	59600.00	kg	Raw material acquisition record	28.8498 kgCO ₂ e/kg	Ecoinvent 3.10 database	1719.4494



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Rubber	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	60.00	kg	Raw material acquisition record	3.4168 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.2050



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Zinc oxide	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	44826.56	kg	Raw material acquisition record	0.7497 kgCO ₂ e/kg	Ecoinvent 3.10 database	33.6051
	Purchased raw material	Oxygen gas	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	136.00	kg	Raw material acquisition record	1.1268 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.1532



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Ethanol	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	330.00	kg	Raw material acquisition record	0.7000 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.2310
	Purchased raw material	Acetylene	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	30.00	kg	Raw material acquisition record	2.5385 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0762



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Isopropanol	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	7240.00	kg	Raw material acquisition record	3.3103 kgCO ₂ e/kg	Ecoinvent 3.10 database	23.9667
	Purchased raw material	Toner ink	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	225.45	kg	Raw material acquisition record	5.8351 kgCO ₂ e/kg	Ecoinvent 3.10 database	1.3155



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Active electronic component	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1178.40	kg	Raw material acquisition record	1273.7223 kgCO ₂ e/kg	Ecoinvent 3.10 database	1500.9543
	Purchased raw material	Grease	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	33085.00	kg	Raw material acquisition record	2.7555 kgCO ₂ e/kg	Ecoinvent 3.10 database	91.1655

Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
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Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Copper-plastic product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	670.00	kg	Raw material acquisition record	76.5347 kgCO ₂ e/kg	Ecoinvent 3.10 database	51.2782
	Purchased raw material	Anode copper material	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	3195.78	kg	Raw material acquisition record	8.5576 kgCO ₂ e/kg	Ecoinvent 3.10 database	27.3481



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Anode copper product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1515352.60	kg	Raw material acquisition record	11.8994 kgCO ₂ e/kg	Ecoinvent 3.10 database	18031.7812
	Purchased raw material	Anode copper strip	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	7163355.21	kg	Raw material acquisition record	9.1686 kgCO ₂ e/kg	Ecoinvent 3.10 database	65677.7334



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Anode copper wire	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	1862148.51	kg	Raw material acquisition record	9.3533 kgCO ₂ e/kg	Ecoinvent 3.10 database	17417.2752
	Purchased raw material	Aluminum plastic product	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	171075.11	kg	Raw material acquisition record	20.9062 kgCO ₂ e/kg	Ecoinvent 3.10 database	3576.5329



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Purchased raw material	Indoor antenna	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	28799.48	kg	Raw material acquisition record	5.4404 kgCO ₂ e/kg	Ecoinvent 3.10 database	156.6816
	Purchased raw material	Outdoor antenna	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	6.88	kg	Raw material acquisition record	9.3122 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0640



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Solid waste treatment	Cable treatment	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	305569.77	kg	2024 solid waste inventory record	0.9103 kgCO ₂ e/kg	Ecoinvent 3.10 database	278.1685
	Solid waste treatment	Steel recycle	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	85285.00	kg	2024 solid waste inventory record	0.0000 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0000



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
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	Solid waste treatment	Copper recycle	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Not applicable	460043.01	kg	2024 solid waste			
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Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Solid waste treatment	Equipment recycle	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	7340.00	kg	2024 solid waste inventory record	0.0000 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0000
	Solid waste treatment	Plastic recycle	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	244959.93	kg	2024 solid waste inventory record	0.0000 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0000



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Solid waste treatment	Paper board recycle	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	51984.00	kg	2024 solid waste inventory record	0.0000 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0000
	Solid waste treatment	Wood recycle	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	182100.00	kg	2024 solid waste inventory record	0.0000 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0000



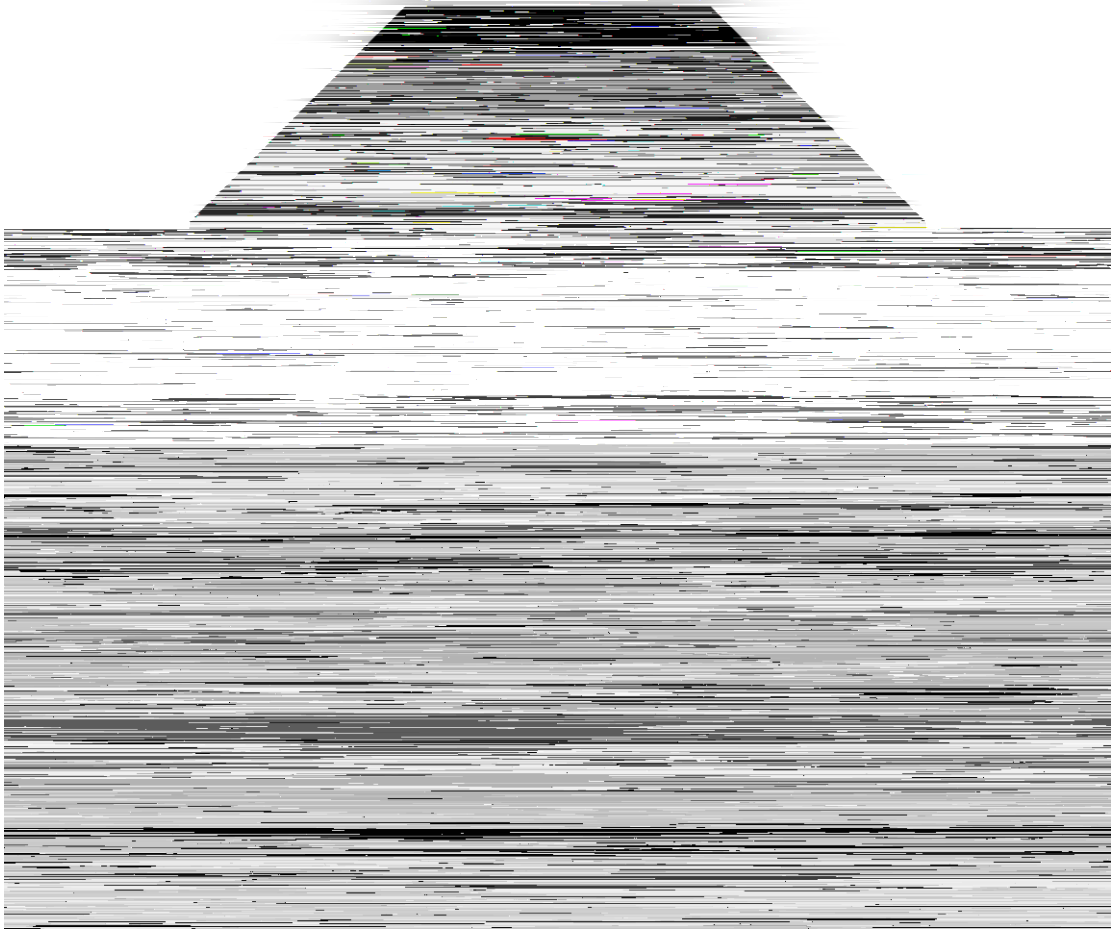
Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Hazardous waste treatment	Waste bucket treatment	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average data method <input type="checkbox"/> Not applicable	3.95	t	2024 hazardous waste transfer joint order	2.5237 kgCO ₂ e/kg		



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Hazardous waste treatment	Waste grease treatment	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	2.14	t	2024 hazardous waste transfer joint order	2.5237 kgCO ₂ e/kg	Ecoinvent 3.10 database	5.4006
	Hazardous waste treatment	Waste activated carbon treatment	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	4.45	t	2024 hazardous waste transfer joint order	2.5237 kgCO ₂ e/kg	Ecoinvent 3.10 database	11.2303



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Wastewater treatment	Wastewater treatment	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	15232.73	m ³	Water balance schematic	0.2921 kgCO ₂ e/m ³	Ecoinvent 3.10 database	4.4493
	Diesel	Diesel upstream	Goods, services and capital goods: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Hybrid method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	13506.895	kg	2024 diesel purchase record	0.9416 kgCO ₂ e/kg	Ecoinvent 3.10 database	12.8027





Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
Category 5: indirect GHG emissions associated with the use of products from the organization	Product disposal	Waste ABS	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	640.00	kg	Raw material acquisition record	2.3799 kgCO ₂ e/kg	Ecoinvent 3.10 database	1.5232
	Product disposal	Waste PP	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	55183.53	kg	Raw material acquisition record	2.6179 kgCO ₂ e/kg	Ecoinvent 3.10 database	144.4671



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Product disposal	Waste rubber	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	30.00	kg	Raw material acquisition record	3.1577 kgCO ₂ e/kg	Ecoinvent 3.10 database	0.0947
	Product disposal	Other waste plastics	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	9945465.74	kg	Raw material acquisition record	2.3799 kgCO ₂ e/kg	Ecoinvent 3.10 database	23669.4469



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Product disposal	Waste electronic component	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	743444.20	kg	Raw material acquisition record	1.0655 kgCO ₂ e/kg	Ecoinvent 3.10 database	792.1635
	Product disposal	Waste wood	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	2221116.50	kg	Raw material acquisition record	0.0156 kgCO ₂ e/kg	Ecoinvent 3.10 database	34.6067



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Product disposal	Waste paper	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	695172.90	kg	Raw material acquisition record	0.0335 kgCO ₂ e/kg	Ecoinvent 3.10 database	23.2878
	Product disposal	Waste cable	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	10225216.85	kg	Raw material acquisition record	0.9103 kgCO ₂ e/kg	Ecoinvent 3.10 database	9308.2946



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Product disposal	Waste steel	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	1802998.94	kg	Raw material acquisition record	0.0186 kgCO ₂ e/kg	Ecoinvent 3.10 database	33.5421
	Product disposal	Waste aluminum	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	517234.53	kg	Raw material acquisition record	0.0261 kgCO ₂ e/kg	Ecoinvent 3.10 database	13.4936



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Product disposal	Waste copper	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	4709416.68	kg	Raw material acquisition record	0.0234 kgCO ₂ e/kg	Ecoinvent 3.10 database	110.1286
	Product disposal	Other waste metal	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	21490.40	kg	Raw material acquisition record	0.5189 kgCO ₂ e/kg	Ecoinvent 3.10 database	11.1524



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Product disposal	Metal-plastic mixed waste	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	1197705.98	kg	Raw material acquisition record	0.5189 kgCO ₂ e/kg	Ecoinvent 3.10 database	621.5466
	Product disposal	Other waste	Waste: <input type="checkbox"/> Supplier-specific method <input type="checkbox"/> Waste-type-specific method <input checked="" type="checkbox"/> Average-data method <input type="checkbox"/> Not applicable	235905.98	kg	Raw material acquisition record	0.5189 kgCO ₂ e/kg	Ecoinvent 3.10 database	122.4228



Emission categories	Emission source	Facilities or process	Accounting method	Activity data	Unit	Source of activity data	Emission factor/Mass balance coefficient	Source of activity data	GHG emission (tCO ₂ e)
	Product disposal transportation	Waste transportation	Transportation, travel and commuting: <input type="checkbox"/> Fuel-based method <input checked="" type="checkbox"/> Distance-based method <input type="checkbox"/> Spend-based method <input type="checkbox"/> Not applicable	6160831.94	tkm	Raw material acquisition record	0.1070 kgCO ₂ e/tkm	Ecoinvent 3.10 database	658.9617
Category 6: indirect GHG emissions from other sources	/	/	Other emission: <input type="checkbox"/> Site-specific method <input type="checkbox"/> Average data method <input checked="" type="checkbox"/> Not applicable	/	/	/	/	No other indirect emissions were verified	0.0000

Any significant GHG sources excluded from GHG quantification:

The responsible party dining hall was out-sourced, and no natural gas or out-sourced heat were used during production, therefore, no natural gas combustion or out-sourced heat emission.

Additional information on activity data for GHG sources and sinks:

As purchase information of activated carbon are quantified in piece, considering the mass conversion being difficult and the mass percentage being minimum in the raw material, the activated carbon purchase information is excluded in the report.



Global warming potential

The global warming potentials of direct and indirect greenhouse gases emitted by the enterprise were taken from the IPCC sixth assessment report, which meet the requirements of the guidelines. The specific values are as follows:

Gas name	Types of greenhouse gases involved in the verification process	Global warming potential
Carbon dioxide	CO ₂	1
Methane	CH ₄	27.9
Nitrous oxide	N ₂ O	273
Hydrofluorocarbon (HFCs)	HFC-32	771
	HFC-125	3740
	HFC-227ea	3600

Verified greenhouse gas emissions

The greenhouse gas emissions of the company were calculated as follows by GHG type:

Type	Category	Category	Category	Category	Category	Category	Total (tCO ₂ e/Year)
	1	2	3	4	5	6	
Non-biogenic CO ₂	89.1860	7483.0827					
Anthropogenic biogenic CO ₂	0.0000	0.0000					
Non-biogenic CH ₄	0.0671	0.0000					
Anthropogenic biogenic CH ₄ e	64.8893	0.0000	23451.201	432536.26	35545.132	0.0000	499211.03
Non-biogenic N ₂ O	4.5280	0.0000	9	41	1		85
Anthropogenic biogenic N ₂ O	0.0000	0.0000					
HFC	36.6872	0.0000					
PFCs	0.0000	0.0000					
SF ₆	0.0000	0.0000					
NF ₃	0.0000	0.0000					
Non-biogenic GHG emissions	130.4684	7483.0827	23451.201 9	432536.26 41	35545.132 1	0.0000	499146.14 92



Anthropogenic biogenic CO₂ emissions	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Anthropogenic biogenic other GHG emissions	64.8893	0.0000	0.0000	0.0000	0.0000	0.0000	64.8893
Total	195.3576	7483.0827	23451.2019	432536.2641	35545.1321	0.0000	499211.0385

GHG emission analysis	
Analysis of emissions of different categories of emission sources	<ul style="list-style-type: none"> - Among the emission categories, anode copper strip is the largest emission category, accounting for about 13.16%. - To fulfil corporate social responsibility and reduce the organization's carbon emissions, it is recommended to find green supplier and incentivize supplier's energy reduction and greener design.
Analysis on emissions of different greenhouse gas emission categories	<ul style="list-style-type: none"> - Among the emission categories, category 4 is the largest emission category, accounting for about 86.64%. - Among category 1, CH₄ is the largest emission GHG, mainly from septic tank fugitive emission - Among category 2, CO₂ is the largest emission GHG, mainly from grid electricity emission
Uncertainty analysis	
<p>The uncertainty assessment of data needs to consider three aspects: activity data category, emission factor grade and instrument calibration grade. The average value is calculated according to the assignment of activity data classification, emission factor grade and instrument calibration grade, and then multiplied by the percentage of each emission source, and then the overall uncertainty score is obtained by summing.</p>	
<ol style="list-style-type: none"> 1) Activity data is divided into three categories according to the collection category, and assigned a score of 1, 3, and 6 respectively 2) Emission factor categories and grades are divided into six categories according to the source of collection, and assigned scores of 6, 5, 4, 3, 2 and 1 respectively. For details, see Table 3-8. 3) The calibration level of the instrument is assigned a score of 6, 3 and 1 according to the calibration situation. 4) The data level is divided into five levels, the higher the level, the better the data quality 	

Grading criteria: The average score 5.0 is grade 1; 5.0 > Score 4.0 is grade 2; 4.0 > Score 3.0 is level 3; 3.0 > Score 2.0 is level 4; A score of < 2.0 is level 5

The verification shows that the uncertainty assessment result of emission source data is 2.32, which belongs to 4-level data quality.

Activity data assignment

Activity data classification	Assign point value
Automatic continuous measurement	6
Periodic measurement (including meter reading)/nameplate data	3
self-estimate	1

Emission factor assignment

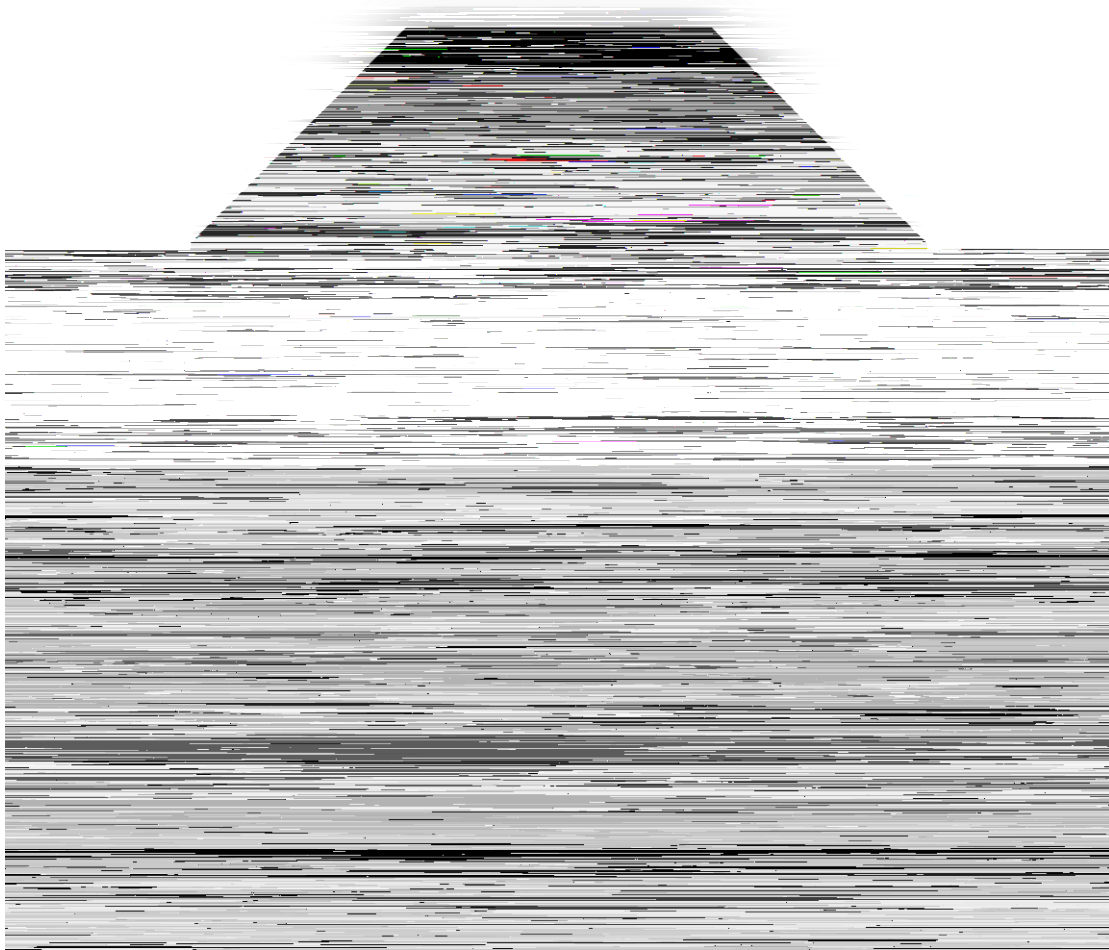
Emission factor classification	Assign point value
Measurement/mass balance resulting factor	6
Process/equipment experience factor	5
Factory-supplied factor	4
Regional emission factor	3
National emission factor	2
International emission factor	1

Instrument calibration level assignment

Level of instrument calibration	Assign point value
There are no regulations requiring enforcement	1
There is no provision for implementation, but the data is recognized or there is a provision for implementation, but the data does not meet the requirements	3
According to the regulations, the data meets the requirements	6

Uncertainty analysis

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
1	Diesel	Diesel forklift	3	1	3	2.33	47.5683	0.01%	0.0002
2	Acetylene	Acetylene combustion	3	1	3	2.33	0.1015	0.00%	0.0000



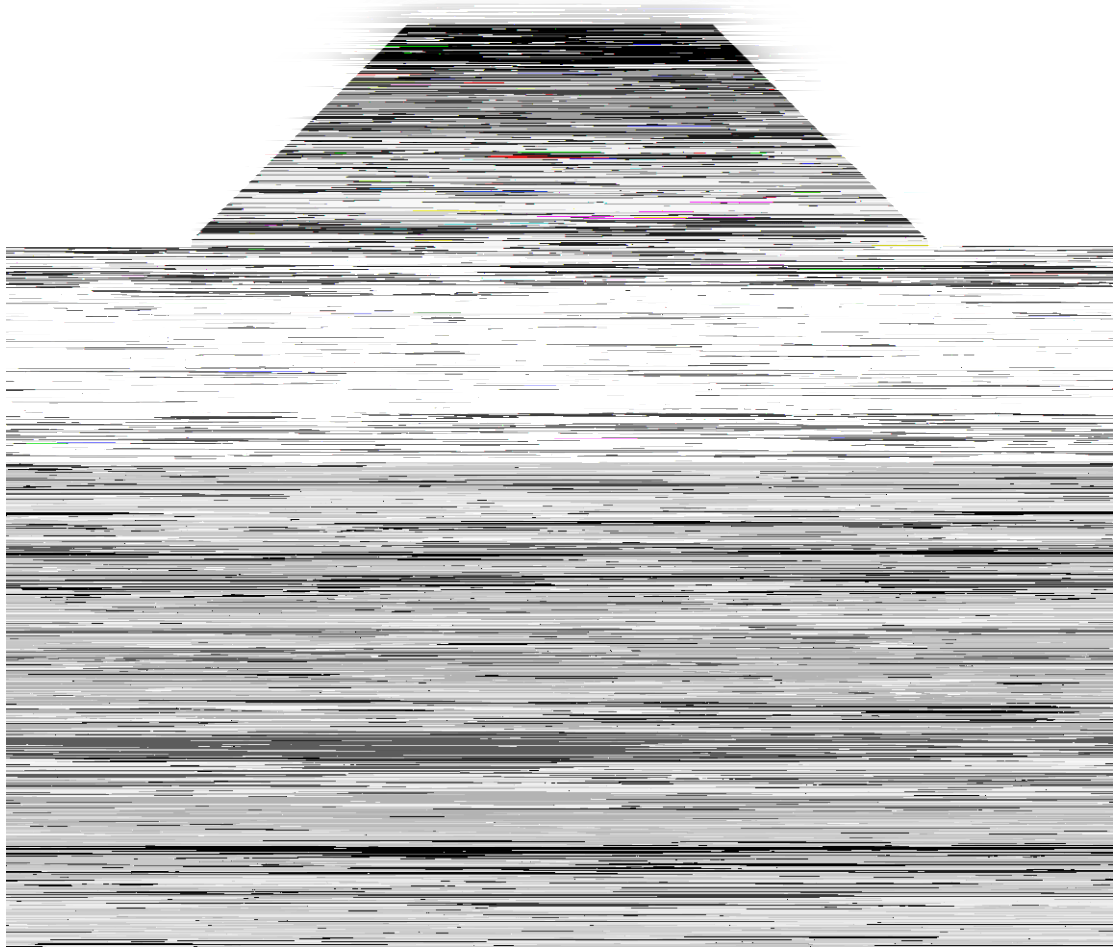


No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
14	Employee commuting vehicle	Outsourcing vehicle	1	1	3	1.67	162.0829	0.03%	0.0005
15	Employee commuting electric vehicle	Outsourcing electric vehicle	1	1	3	1.67	68.6778	0.01%	0.0002
16	Employee commuting electric bike	Outsourcing electric bike	1	1	3	1.67	6.5222	0.00%	0.0000
17	Employee taxi traveling	Taxi traveling	3	1	3	2.33	0.4031	0.00%	0.0000
18	Employee plane traveling	Plane traveling	3	1	3	2.33	17.5831	0.00%	0.0001
19	Employee rail traveling	Rail traveling	3	1	3	2.33	9.7753	0.00%	0.0000
20	Employee subway traveling	Subway traveling	3	1	3	2.33	0.000012	0.00%	0.0000
21	Employee bus traveling	Bus traveling	3	1	3	2.33	0.0324	0.00%	0.0000
22	Upstream material transportation	Upstream material road transportation <3.5t	3	1	3	2.33	1393.3173	0.28%	0.0065



No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
23	Upstream material transportation	Upstream material road transportation 3.5t-16t	3	1	3	2.33	1303.2020	0.26%	0.0061
24	Upstream material transportation	Upstream material road transportation 16t-32t	3	1	3	2.33	2287.1907	0.46%	0.0107
25	Hazardous waste transportation	Hazardous waste road transportation	3	1	3	2.33	0.0137	0.00%	0.0000
26	Solid waste transportation	Solid waste road transportation	3	1	3	2.33	24.4080	0.00%	0.0001
27	Downstream material transportation	Downstream material road transportation <3.5t	3	1	3	2.33	10747.6085	2.15%	0.0502
28	Downstream material transportation	Downstream material road transportation 3.5t-16t	3	1	3	2.33	3124.3441	0.63%	0.0146
29	Downstream material transportation	Downstream material road transportation 16t-32t	3	1	3	2.33	2761.6855	0.55%	0.0129

No.	Emission Categories	Facilities	Activity
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No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
53	Purchased raw material	PET product	3	1	3	2.33	364.9446	0.07%	0.0017
54	Purchased raw material	PE film	3	1	3	2.33	540.4540	0.11%	0.0025
55	Purchased raw material	PFA material	3	1	3	2.33	17.8742	0.00%	0.0001
56	Purchased raw material	PO material	3	1	3	2.33	5353.737	1.07%	0.0250
57	Purchased raw material	PP material	3	1	3	2.33	355.4863	0.07%	0.0017
58	Purchased raw material	PP plastic strip	3	1	3	2.33	2.8465	0.00%	0.0000
59	Purchased raw material	PP product	3	1	3	2.33	210.6151	0.04%	0.0010
60	Purchased raw material	PTFE material	3	1	3	2.33	21718.6158	4.35%	0.1014
61	Purchased raw material	PTFE product	3	1	3	2.33	98.2954	0.02%	0.0005
62	Purchased raw material	PVC material	3	1	3	2.33	2121.0542	0.42%	0.0099
63	Purchased raw material	Propane	3	1	3	2.33	0.5913	0.00%	0.0000



No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
64	Purchased raw material	Glass fiber material	3	1	3	2.33	9.0274	0.00%	0.0000
65	Purchased raw material	Stainless steel wire	3	1	3	2.33	10.0112	0.00%	0.0000
66	Purchased raw material	Stainless steel product	3	1	3	2.33	42951.1381	8.60%	0.2005
67	Purchased raw material	Aluminum product	3	1	3	2.33	42.6357	0.01%	0.0002
68	Purchased raw material	Aluminum strip	3	1	3	2.33	41697.9448	8.35%	0.1946
69	Purchased raw material	Nitrogen gas	3	1	3	2.33	7.0891	0.00%	0.0000
70	Purchased raw material	Galvanized steel strip	3	1	3	2.33	9321.1004	1.87%	0.0435
71	Purchased raw material	Galvanized steel wire	3	1	3	2.33	23.3664	0.00%	0.0001
72	Purchased raw material	Cable	3	1	3	2.33	64238.2961	12.87%	0.2998
73	Purchased raw material	Power supply	3	1	3	2.33	11.7295	0.00%	0.0001
74	Purchased raw material	Resistor	3	1	3	2.33	34.7923	0.01%	0.0002



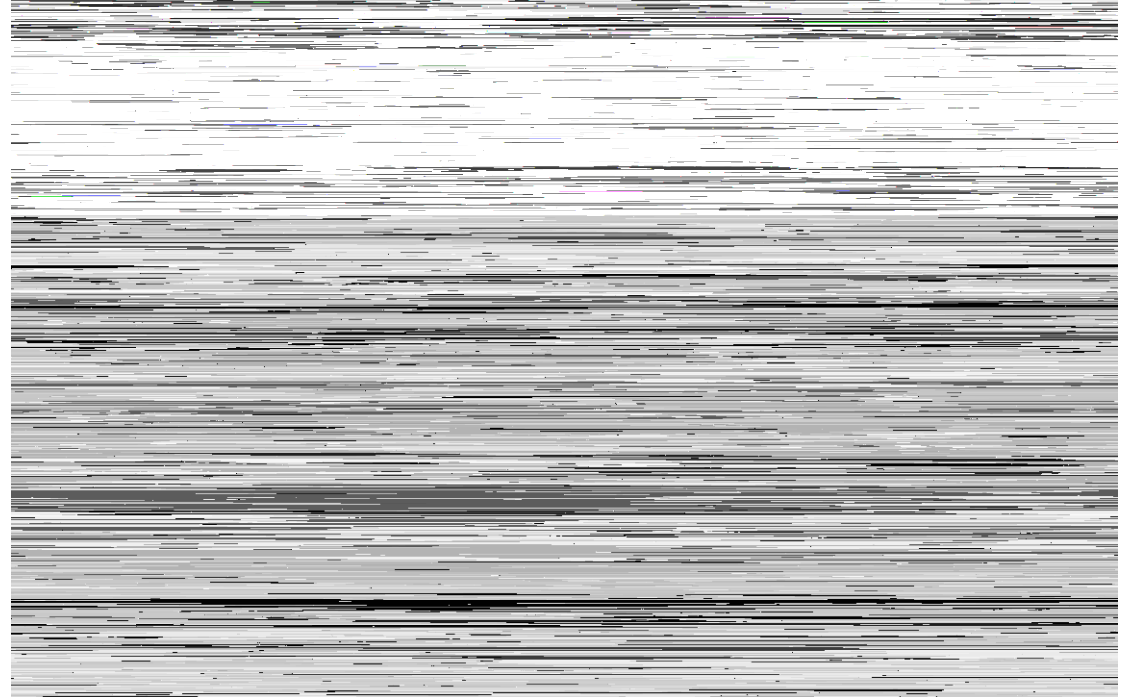
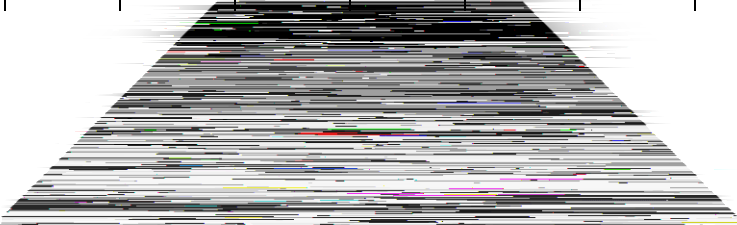
No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
75	Purchased raw material	Optical fiber	3	1	3	2.33	39.6629	0.01%	0.0002
76	Purchased raw material	Carbon dioxide	3	1	3	2.33	40.0224	0.01%	0.0002
77	Purchased raw material	Silicone product	3	1	3	2.33	0.7106	0.00%	0.0000
78	Purchased raw material	Mica strip	3	1	3	2.33	9.8448	0.00%	0.0000
79	Purchased raw material	Helium gas	3	1	3	2.33	33.3018	0.01%	0.0002
80	Purchased raw material	Combiner	3	1	3	2.33	1019.5072	0.20%	0.0048
81	Purchased raw material	Chemicals	3	1	3	2.33	7.7005	0.00%	0.0000
82	Purchased raw material	Brass material	3	1	3	2.33	0.0163	0.00%	0.0000
83	Purchased raw material	Brass product	3	1	3	2.33	6855.4566	1.37%	0.0320
84	Purchased raw material	Brass strip	3	1	3	2.33	29.9878	0.01%	0.0001
85	Purchased raw material	Brass wire	3	1	3	2.33	3125.1957	0.63%	0.0146



No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
86	Purchased raw material	Methane	3	1	3	2.33	0.0051	0.00%	0.0000
87	Purchased raw material	Plywood	3	1	3	2.33	1014.0485	0.20%	0.0047
88	Purchased raw material	Metal processing	3	1	3	2.33	61.1840	0.01%	0.0003
89	Purchased raw material	Poly olefin material	3	1	3	2.33	2.9218	0.00%	0.0000
90	Purchased raw material	Aluminum alloy product	3	1	3	2.33	36.2528	0.01%	0.0002
91	Purchased raw material	Wood pallet	3	1	3	2.33	1090.6983	0.22%	0.0051
92	Purchased raw material	Nylon material	3	1	3	2.33	0.9077	0.00%	0.0000
93	Purchased raw material	Nylon product	3	1	3	2.33	1.8364	0.00%	0.0000
94	Purchased raw material	Kraft paper	3	1	3	2.33	473.3058		

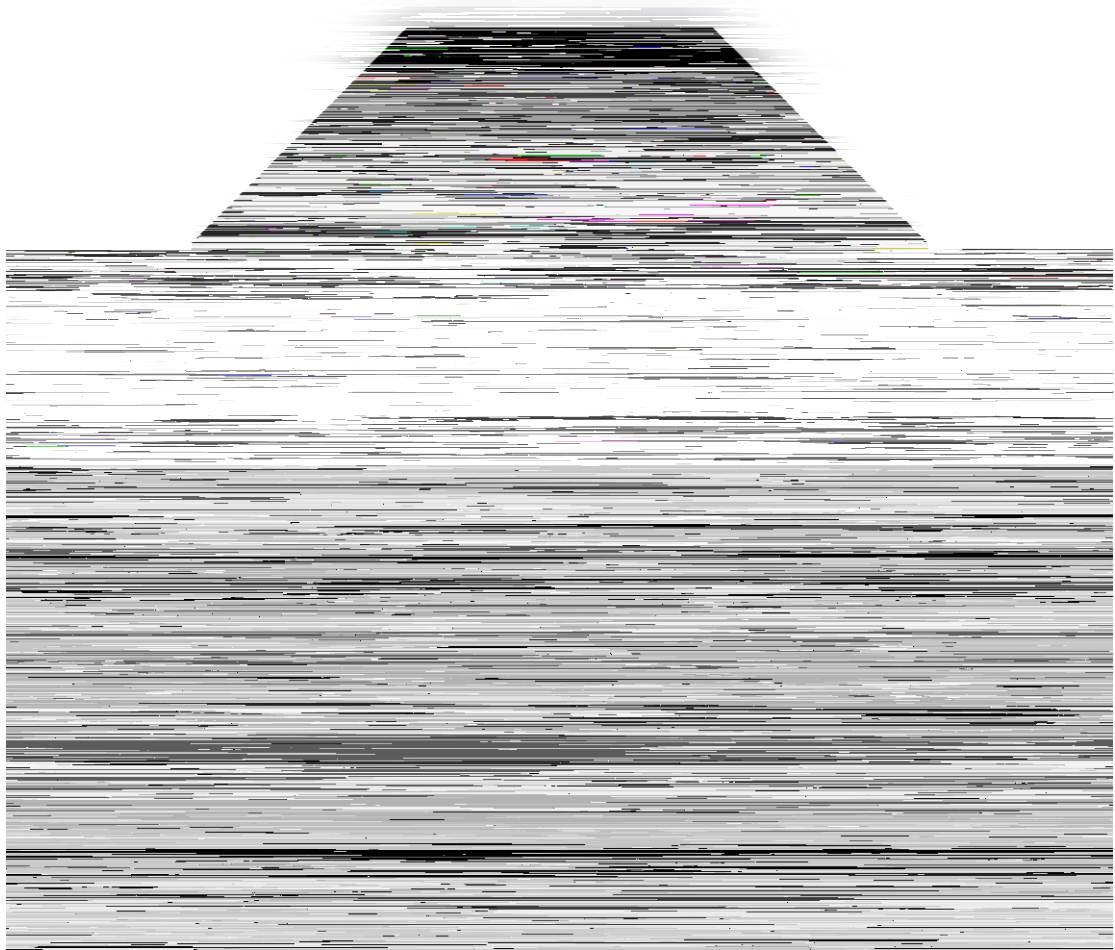


No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
97	Purchased raw material	Wood product	3	1	3	2.33	0.0667	0.00%	0.0000
98	Purchased raw material	Titanium alloy product	3	1	3	2.33	439.1707	0.09%	0.0020
99	Purchased								



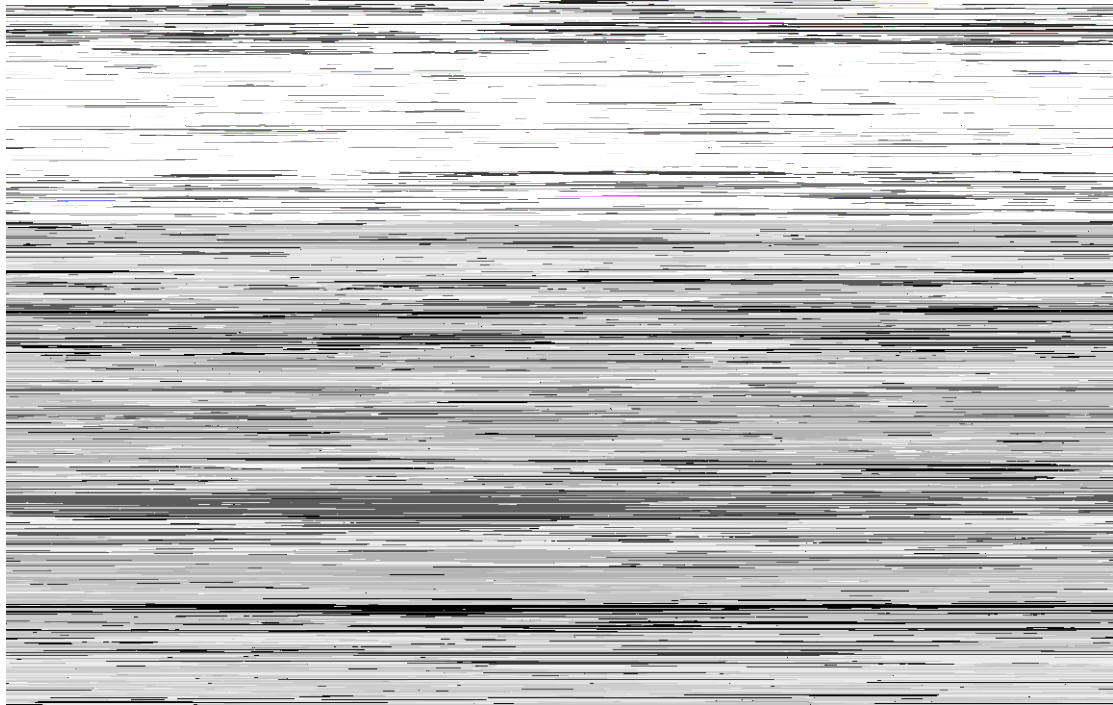


No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
107	Purchased raw material	Passive electronic component	3	1	3	2.33	8967.4962	1.80%	0.0419
108	Purchased raw material	Solder material	3	1	3	2.33	1719.4494	0.34%	0.0080
109	Purchased raw material	Rubber	3	1	3	2.33	0.2050	0.00%	0.0000
110	Purchased raw material	Argon gas	3	1	3	2.33	156.0685	0.03%	0.0007
111	Purchased raw material	Zinc oxide	3	1	3	2.33	33.6051	0.01%	0.0002
112	Purchased raw material	Oxygen gas	3	1	3	2.33	0.1532	0.00%	0.0000
113	Purchased raw material	Ethanol	3	1	3	2.33	0.2310	0.00%	0.0000
114	Purchased raw material	Acetylene	3	1	3	2.33	0.0762	0.00%	0.0000
115	Purchased raw material	Isopropano	3	1	3	2.33	23.9667	0.00%	0.0001





No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
129	Solid waste treatment	Cable treatment	3	1	3	2.33	278.1685	0.06%	0.0013
130	Solid waste treatment	Steel recycle		1	3	2.33	0.0000	0.00%	0.0000





No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
140	Hazardous waste treatment	Waste activated carbon treatment	3	1	3	2.33	11.2303	0.00%	0.0001
141	Wastewater treatment	Wastewater treatment	3	1	3	2.33	4.4493	0.00%	0.0000
142	Diesel	Diesel upstream	2	1	3	2.33	12.8027	0.00%	0.0001
143	Imported electricity	Electricity upstream production	3	2	3	2.67	1374.3736	0.28%	0.0074
144	Imported electricity	Electricity transmission and distribution loss	3	2	3	2.67	462.5893	0.09%	0.0025
145	Imported electricity	Photovoltaic electricity	3	2	3	2.67	203.6972	0.04%	0.0011
146	Product disposal	Waste ABS	3	1	3	2.33	1.5232	0.00%	0.0000
147	Product disposal	Waste PP	3	1	3	2.33	144.4671	0.03%	0.0007
148	Product disposal	Waste rubber	3	1	3	2.33	0.0947	0.00%	0.0000
149	Product disposal	Other waste plastics	3	1	3	2.33	23669.4469	4.74%	0.1105
150	Product disposal	Waste electronic component	3	1	3	2.33	792.1635	0.16%	0.0037
151	Product disposal	Waste wood	3	1	3	2.33	34.6067	0.01%	0.0002



No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO ₂ e)	Emission proportion	Weighted average score
152	Product disposal	Waste paper	3	1	3	2.33	23.2878	0.00%	0.0001
153	Product disposal	Waste cable	3	1	3	2.33	9308.2946	1.86%	0.0434
154	Product disposal	Waste steel	3	1	3	2.33	33.5421	0.01%	0.0002
155	Product disposal	Waste aluminum	3	1	3	2.33	13.4936	0.00%	0.0001
156	Product disposal	Waste copper	3	1	3	2.33	110.1286	0.02%	0.0005
157	Product disposal	Other waste metal	3	1	3	2.33	11.1524	0.00%	0.0001
158	Product disposal	Metal plastic mixed waste	3	1	3	2.33	621.5466	0.12%	0.0029
159	Product disposal	Other waste	3	1	3	2.33	422.4228	0.02%	0.0006
160	Product disposal transportation	Waste transportation	3	1	3	2.33	658.9617	0.13%	0.0031
	Total	/	/	/	/	/	499211.0385	100.00%	2.3233
Weighted total									2.32
Weighted level									4



uncertainty analysis	<ul style="list-style-type: none"> - Three factors, namely activity level data, emission factor and correction level, were evaluated. - Activity level data with low accuracy level include employee commuting, septic tank and other data. The responsible party should obtain activity level data by measured method as far as possible to improve data accuracy under the condition of technical feasibility and reasonable cost. - The lower level of accuracy of emission factor data is the data from purchased raw material, solid waste treatment, upstream & downstream material transportation, product disposal and other data. It is suggested that the responsible party adopt the detection method for characteristic emission factors to obtain a higher level of data accuracy. - Responsible parties are advised to incorporate calibration of monitoring equipment involving carbon activity level data
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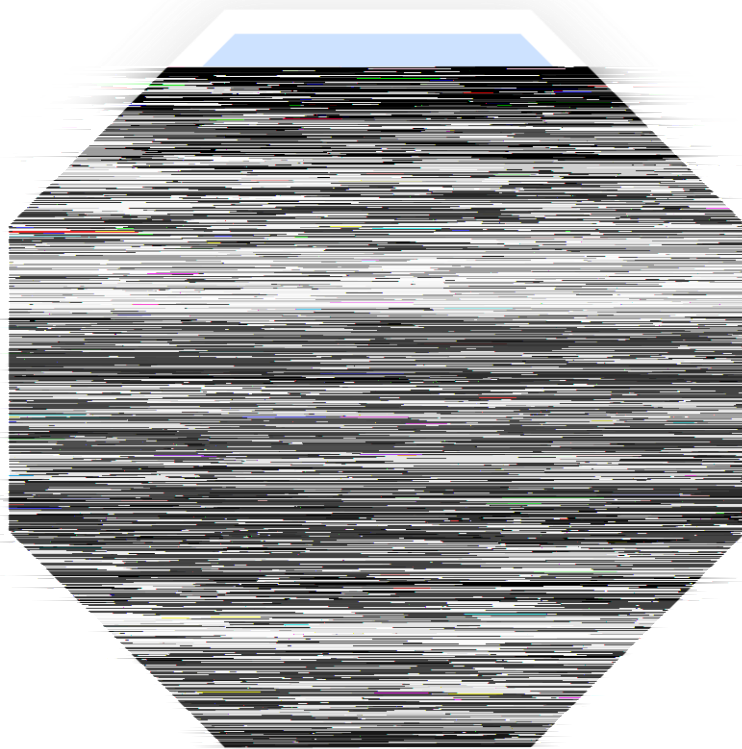
Material discrepancy
<p>After verification, the total greenhouse gas emissions of the responsible party at the organizational level in 2024-01-01~2024-12-31 were 499211.0385 tCO₂e, and the emissions reported by the greenhouse gas inventory were 499211.0385 tCO₂e. Therefore, the material deviation claimed by the responsible party is within the material threshold of verification.</p>

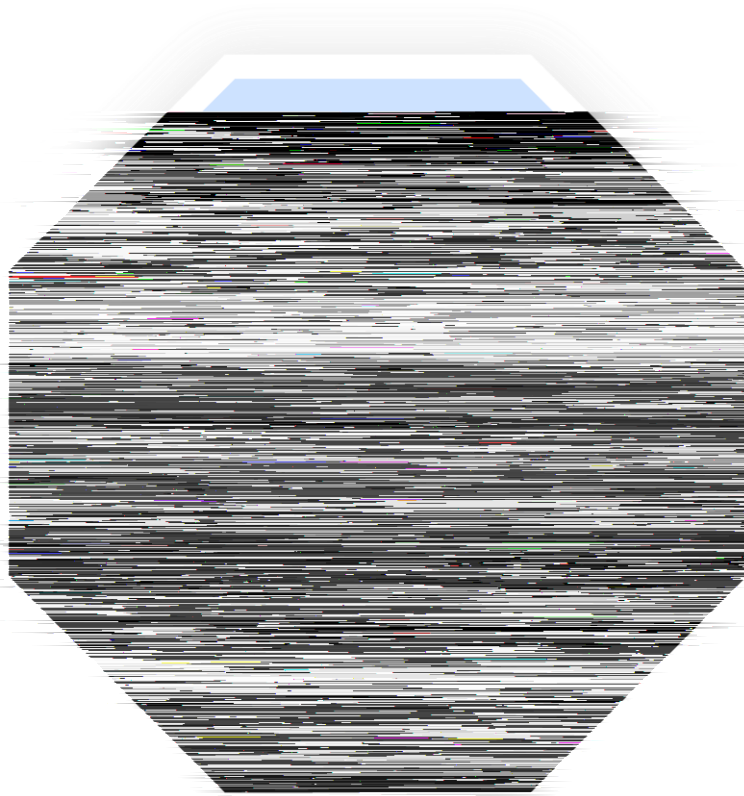
3.3. Assessment of changes from prior period

<p>The reporting boundary in 2023 from the responsible party is category 1 and category 2, and the organizational boundary in 2023 from the responsible party is No 105 Qixin Road, Economic & Technological Development Zone, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA. The reporting boundary in 2024 from the responsible party is category 1-6, and the organizational boundary in 2024 from the responsible party is No 105 Qixin Road, Economic & Technological Development Zone, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA, No 1 Tianchi Road, Hekou Town, Rudong, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA, Second Floor of Office Building 3, Zhongtian Industrial Park, Hekou Town, Rudong, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA. As both the reporting boundary and organizational boundary were changed in 2024, the base year was adjusted to 2024-01-01~2024-12-31.</p>

4. References

- 1) ISO 14064-1:2018 *Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*
- 2) ISO 14064-3:2019 *Greenhouse gases — Part 3: Specification with guidance for the verification and validation of GHG (e) (3) (e) (3) validation*





Team member Tony Sun:



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