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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 Testing (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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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 .... :	☒ 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* ☒ ISO 14064-3:2019 *Greenhouse gases — Part 3: Specification with guidance for the verification and validation of greenhouse gas statements*
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:	☐ Financial control ☒ Operational control ☐ Equity share
Level of assurance..... :	☒ Reasonable ☐ 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 ..... :	☒ Category 1: direct GHG emissions and removals ☒ Category 2: indirect GHG emissions from imported energy ☒ Category 3: indirect GHG emissions from transportation

	☒ Category 4: indirect GHG emissions from products used by organization ☒ Category 5: indirect GHG emissions associated with the use of products from the organization ☒ Category 6: indirect GHG emissions from other sources
GHG groups.....:	Including CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3 seven types of greenhouse gases
GHG sources and sinks.:	The facilities of the organization contributing to GHG emissions within the reporting boundaries
Base year.....:	2024-01-01~2024-12-31
Verification conclusion...:	In accordance with ISO 14064-3:2019, the claim submitted by the responsible party was verified. It was verified that the organization's calculations of carbon emissions within the boundaries meet the requirements of ISO14064-1:2018 and that the claimed data and information are based on historical fact and there is no major discrepancy.
Verification conclusion types.....:	☒ Unqualified opinion ☐ Qualified opinion ☐ Adverse opinion ☐ Disclaiming the issuance of an opinion
Verification team member.....:	Tony Sun
Leader of verification team.....:	Johny Wang
Other personnel (observers, interns/trainees, external assessors, etc.).....:	Observers: /
	Interns / trainees: /
	External auditors: /

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 GHG claim are clearly identified. 3） The Organization's GHG emissions verification verifies claims made by responsible party in accordance with standard ISO 14064-1:2018. 4） The reasonable level of assurance determined in the process of the verification follows the agreed goals, specifications, and Category. 5） No material discrepancy exists in the GHG claim of the organization. 6） No limitation exists for the use of the verification statement about the GHG claim of the organization. 7） This is the second time verification. It is the base year verification, as there are changes in organizational boundaries and reporting boundaries. Based on the above judgement, TÜV SÜD has decided to issue an unqualified opinion on the GHG claims provided by the organization. The verification conclusion is presented in the verification summary.	
GHG emissions from covered period disclosed by the GHG claim of the organization listed as below:	
Category 1: direct GHG emissions and removals (tCO_2e)	195.3576
Category 2: indirect GHG emissions from imported energy (tCO_2e)	7483.0827
Category 3: indirect GHG emissions from transportation (tCO_2e)	23451.2019
Category 4: indirect GHG emissions from products used by organization (tCO_2e)	432536.2641
Category 5: indirect GHG emissions associated with the use of products from the organization (tCO_2e)	35545.1321
Category 6: indirect GHG emissions from other sources (tCO_2e)	0.0000

Total GHG emissions (tCO2e)	499211.0385
Of which, total anthropogenic biogenic GHG emissions from all categories	64.8893

Statement of responsibility
1）The responsible party shall be responsible for claiming that its GHG emissions comply with ISO14064-1:2018, and the responsible party shall be responsible for the preparation and fair presentation of GHG reports in accordance with the standards. 2）The auditors are responsible for issuing verification statements based on verification of GHG emission claims, the verification process, and results in accordance with ISO 14064-3: 2019. 3）The verification evidence collection procedure for evaluating GHG claims is: CCB_VV_P_09ECS Validation and Verification Process Implementation Procedure.

2. Verification process

2.1. Contents confirmed before verification

Responsible party profile
Founded in December 2004, Zhongtian RF Cable Co., Ltd. covers an area of 70,500 square meters, building area of 40,000 square meters, with a registered capital of 500 million yuan. The company's main products include high temperature coaxial cable, RF coaxial cable, leaky coaxial cable, railway signal cable, hybrid cable, communication cable for railway transportation equipment, data cable, RF coaxial connector, RF coaxial jumper, communication network cable, arrester, feeder clamp, leaky cable clamp, and trunking assemblies. Mainly used in various types of mobile communications, microwave communications, radio broadcasting systems, railway tunnels, railroad locomotives and ships and other fields. It has an annual production capacity of 10,000km communication cable for rail transportation equipment, 50,000km data cable, 5,000km high temperature cable, 15,000km leaky cable, 80,000km high-quality RF cable, 13,000km rail signal cable, and related supporting accessories. The company has imported a full set of critical production equipment, with internationally advanced imported physical foaming and welding rolling production lines, equipped with domestic advanced twisting and cable forming machines, and adopting domestic advanced CNC machine tools to produce a variety of supporting accessories products. The company has set up the most modern and complete CNAS-certified communication product testing center and combustion laboratory to monitor the stability and reliability of product quality, as well as cable flame retardant, fire-resistant and other safety performance tests. The company has been adhering to the sustainable development strategy, the environmental protection and scientific and technological innovation effectively combined, out of a green, high-tech development road. With the quality policy of "customer satisfaction, excellence, continuous improvement and innovation", we strive to build the company into a first-class enterprise, better fulfill

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
☒ Reasonable assurance ☐ Limited assurance
Verification purpose
☒ Verify the accuracy and conformity claimed by the responsible party according to the verification criteria. ☒ 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. ☐ Others:
Verification Standard
☒ 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.* ☒ ISO 14064-3:2019 *Greenhouse gases — Part 3: Specification with guidance for the verification and validation of greenhouse gas statements.*

Verification Category	
Organizational boundary	Under ☐ Financial control / ☒ Operational control/ ☐ Equity share The facilities of the organization contributing to GHG emissions within the reporting boundary.
Operation Site Covered by Verification activities:	Zhongtian Radio Frequency Cable Co., Ltd. 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 Optical Cable Office, Optical Cable Factory, Zhongtian Second Floor of Office Building 3, Zhongtian Industrial Park, Hekou Town, Rudong, Nantong, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
Reporting Boundary	☒ Category 1: direct GHG emissions and removals ☒ Category 2: indirect GHG emissions from imported energy ☒ Category 3: indirect GHG emissions from transportation ☒ Category 4: indirect GHG emissions from products used by organization ☒ Category 5: indirect GHG emissions associated with the use of products from the organization ☒ Category 6: indirect GHG emissions from other sources

Quantified emission source attributes	☒ Non-biogenic GHG emissions and removals ☒ Anthropogenic biogenic CO_2 emissions and removals ☒ Anthropogenic biogenic emissions and removals of other GHGs ☐ 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	☒ CO_2 ☒ CH_4 ☒ N_2O ☒ HFCs ☒ PFCs ☒ SF_6 ☒ 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

2.3. Document Review

Strategic analysis
Verification team performed strategic analysis before site visit, and reviewed contents as below: 1) Agreed level of assurance, significance, criteria, goal, and Category. 2) Complexity during the measurement or monitoring process of GHG at the organization level. 3) Sources of GHG in the organization and their quantifications and monitoring of GHG projects. 4) The process or system which provided the information and data in GHG project plan and GHG claim. 5) Relationship and interaction between stakeholders of the organization, responsible parties, clients and intended users. 6) The reason why the client chooses the specification and procedure. 7) Calculation procedure of GHG. 8) Other GHG related documents provided by the organization. Through strategic analysis, verification team confirmed information as below: 1) The results of the verification fulfill the agreed level of assurance, significance, criteria, goal and Category. 2) The GHG inventory report edited by the organization is complete. 3) The measurement or monitoring process of the organization is simple. 4) The company's emission sources mainly include diesel forklift, air conditioning refrigerant, fire extinguisher and septic tank escape emissions, and net purchased electricity, upstream & downstream transportation, production equipment, raw material purchase, waste disposal and other indirect emissions. 5) Reviewed the status of the management system for quantification and reporting GHG emissions of the organization. 6) The organization verified has specified GHG management structure, the process for providing data and data recording in the GHG inventory control procedure. 7) GHG activity data generation, delivery, collection, and reporting were confirmed. The acquiring method was transparent and can represent the actual level of the organization. 8) The resource of GHG activity data for cross check were financial invoices of the organization, true and reliable.
Risk assessment
The verification team evaluated the strategic analysis output of the verification activities, audit criteria, GHG information control, and the reliability of activity level data. This verification is based on ISO 14064-3:2019 to verify the greenhouse gas claims within the organizational boundaries of the verified enterprises. The Category of the organizational boundaries of the verified enterprises is clear, the greenhouse gas accounting and control procedures are perfect, and the method of generating, transmitting and summarizing activity level data is transparent and accurate. Evidence materials and cross-check source data of major greenhouse gas activity levels are available 100% of data sources

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
The verification team identified the risks of verification activities in advance through strategic analysis and risk assessment, to formulate a reasonable evidence-gathering plan. The verification adopts 100% collection of data sources, and the sampling proportion of cross check data sources is 92.86%. This verification confirmed the activity data of the responsible party during the evidence gathering activities through the following verification activities and techniques: ☐ Analytical testing ☒ Controlling testing ☒ Estimate testing ☐ Sampling ☐ Others:

2.4. Site visit

Date	Verification contents
2025-04-07~2025-04-08	- Verification criteria - Basic information of the verified party - Determine the GHG emission boundary of the enterprise - Determine the current situation of enterprise GHG management. - Determine the intended users of enterprise GHG inventory - Understand the energy consumption of the enterprise - GHG information system of the verified party
2025-04-07~2025-04-08	- Determine the GHG emission sources, sinks and reservoirs of the enterprise - Accuracy and reliability of enterprise activity level data selection
2025-04-07~2025-04-08	- Preparation of GHG inventory report - Contents of GHG inventory report - Determine the conformity of calculation method and emission factor - Material discrepancy of GHG claim of enterprise
2025-04-07~2025-04-08	- Raw evidence of GHG activity data

2025-04-07~2025-04-08	- 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	- 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	- 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
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. 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. 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： - 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 fire extinguishers 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 calculation process.

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	GHG emission (tCO_2e)
Category 1: direct GHG emissions and removals	Diesel	Diesel forklift	Direct emission ☒ Emission factor method ☐ Mass balance method ☐ Measurement method	16091.00	L	2024 diesel purchase record	CO_2: 74100 $kgCO_2/TJ$ CH_4: 4.15 $kgCH_4/TJ$ N_2O: 28.6 kgN_2O/TJ Heat value: 42652 TJ/Gg	*2006 IPCC Guidelines for National Greenhouse Gas Inventories* Table 3.3.1, Chapter III, Volume II *China Energy Statistical Yearbook 2022* Appendix IV	47.5683
	Acetylene	Acetylene combustion	Direct emission ☐ Emission factor method ☒ Mass balance method ☐ Measurement method	30.00	kg	Raw material acquisition record	3.3846 $kgCO_2/kg$		0.1015

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_2e)
	Propane	Propane combustion	Direct emission ☐ Emission factor method ☒ Mass balance method ☐ Measurement method	546.00	kg	Raw material acquisition record	3.0000 $kgCO_2/kg$		1.6380
	Methane	Methane combustion	Direct emission ☐ Emission factor method ☒ Mass balance method ☐ Measurement method	3.72	kg	Raw material acquisition record	2.7500 $kgCO_2/kg$		0.0102
	R32	Air conditioning	Direct emission ☒ Emission factor method ☐ Mass balance method ☐ 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_2e)
	R410A	Air conditioning	Direct emission ☒ Emission factor method ☐ Mass balance method ☐ Measurement method	279.30	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	34.6479
	HFC-227ea	Fire extinguisher	Direct emission ☒ Emission factor method ☐ Mass balance method ☐ Measurement method	4.00	kg	Fire extinguisher type, number, and original fill.	Fugitive factor: 2%	*2006 IPCC Guidelines for National Greenhouse Gas Inventories* 7.6.2.2, Chapter VII, volume III	0.2880
	Carbon dioxide	Fire extinguisher	Direct emission ☒ Emission factor method ☐ Mass balance method ☐ Measurement method	10.00	kg	Fire extinguisher type, number, and original fill.	Fugitive factor: 5.0%	GB 4351.1-2005 *Portable fire extinguishers- Part 1: Performance and construction*	0.0005

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_2e)
	Carbon dioxide	Gas usage	Direct emission ☐ Emission factor method ☒ Mass balance method ☐ Measurement method	44462.60	kg	Raw material acquisition record	1.0000 $kgCO_2/kg$		44.4626
	Septic-tank	Septic-tank	Direct emission ☒ Emission factor method ☐ Mass balance method ☐ 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 (B0): 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: ☒ Location-based method ☐ Market-based method	13945364.75	kWh	Enterprise's power statistics	0.5366 $kgCO_2/kWh$	2022 National Grid Average CO2 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_2e)
	Imported electricity	Zhongtian Photovoltaic Technology Co., Ltd. sourced electricity	Electricity and heat: ☒ Location-based method ☐ 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: ☒ Location-based method ☐ 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: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	446277.60	km	Employee commuting statistics	0.3632 $kgCO_2e/km$	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_2e)
	Employee commuting electric vehicle	Outsourcing electric vehicle	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	287217.00	pkm	Employee commuting statistics	0.2391 $kgCO_2e$/pkm	Ecoinvent 3.10 database	68.6778
	Employee commuting electric bike	Outsourcing electric bike	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	241413.60	km	Employee commuting statistics	0.0270 $kgCO_2e$/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_2e)
	Employee taxi traveling	Taxi traveling	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	1110.00	pkm	Employee traveling compensate record	0.3632 $kgCO_2e$/km	Ecoinvent 3.10 database	0.4031
	Employee plane traveling	Plane traveling	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	159935.00	pkm	Employee traveling compensate record	0.1099 $kgCO_2e$/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_2e)
	Employee rail traveling	Rail traveling	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	130565.00	pkm	Employee traveling compensate record	0.0749 $kgCO_2e$/pkm	Ecoinvent 3.10 database	9.7753
	Employee subway traveling	Subway traveling	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	360.00	pkm	Employee traveling compensate record	0.000032 $kgCO_2e$/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_2e)
	Employee bus traveling	Bus traveling	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	270.00	pkm	Employee traveling compensate record	0.1202 $kgCO_2e$/pkm	Ecoinvent 3.10 database	0.0324
	Upstream material transportation	Upstream material road transportation <3.5t	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	658086.31	tkm	Raw material acquisition record	2.1172 $kgCO_2e$/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_2e)
	Upstream material transportation	Upstream material road transportation 3.5t-16t	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	5317580.13	tkm	Raw material acquisition record	0.2451 $kgCO_2e$/tkm	Ecoinvent 3.10 database	1303.2020
	Upstream material transportation	Upstream material road transportation 16t-32t	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	11788821.73	tkm	Raw material acquisition record	0.1940 $kgCO_2e$/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_2e)
	Hazardous waste transportation	Hazardous waste road transportation	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	128.19	tkm	2024 hazardous waste transfer joint order	0.1070 $kgCO_2e$/tkm	Ecoinvent 3.10 database	0.0137
	Solid waste transportation	Solid waste road transportation	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	228197.74	tkm	2024 solid waste inventory record	0.1070 $kgCO_2e$/tkm	Ecoinvent 3.10 database	24.4080

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_2e)
	Downstream material transportation	Downstream material road transportation <3.5t	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	5076269.27	tkm	2024 sales record	2.1172 $kgCO_2e$/tkm	Ecoinvent 3.10 database	10747.6085
	Downstream material transportation	Downstream material road transportation 3.5t-16t	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	12748561.02	tkm	2024 sales record	0.2451 $kgCO_2e$/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_2e)
	Downstream material transportation	Downstream material road transportation 16t-32t	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	14234501.04	tkm	2024 sales record	0.1940 $kgCO_2e$/tkm	Ecoinvent 3.10 database	2761.6855
	Downstream material transportation	Downstream material road transportation >32t	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	14438641.30	tkm	2024 sales record	0.1070 $kgCO_2e$/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_2e)
Category 4: indirect GHG emissions from products used by organization	Production equipment	Production equipment cost	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☐ Average-data method ☒ Spend-based method ☐ Not applicable	1275.43	Ten thousand RMB	Stationary equipment record	1.9524 tCO_2e/ten thousand RMB	*Chinese Environmentally Extended Input-Output database* adjusted by 2024 PPI	2490.1583
	Office equipment	Computer	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	54.67	p	2024 office equipment record	596.5844 $kgCO_2e$/p	Ecoinvent 3.10 database	32.6133

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_2e)
	Office equipment	Printer	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	5.17	p	2024 office equipment record	63.3572 $kgCO_2e/p$	Ecoinvent 3.10 database	0.3273
	Office equipment	Stationery	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☐ Average-data method ☒ Spend-based method ☐ Not applicable	11.76	Ten thousand RMB	2024 stationery purchase record	1.5547 tCO_2e/ten thousand RMB	*Chinese Environmentally Extended Input-Output database* adjusted by 2024 PPI	18.2807

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_2e)
	Purchased service	Dining cost	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☐ Average-data method ☒ Spend-based method ☐ Not applicable	132.22	Ten thousand RMB	2024 dining cost settlement	0.7397 tCO_2e/ten thousand RMB	*Chinese Environmentally Extended Input-Output database* adjusted by 2024 PPI	97.8039
	Purchased service	Processing service	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☐ Average-data method ☒ Spend-based method ☐ Not applicable	193.27	Ten thousand RMB	Raw material acquisition record	1.7796 tCO_2e/ten thousand RMB	*Chinese Environmentally Extended Input-Output database* adjusted by 2024 PPI	343.9419

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_2e)
	Purchased living products	Drinking water	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	161.25	m^3	Drinking water purchase record	0.3913 $kgCO_2e/kg$	*China Products Carbon Footprint Factors Database*, Drinking water	63.0959
	Tap water	Tap water	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	95795.00	m^3	2024 tap water invoice	0.0013 $kgCO_2e/kg$	Ecoinvent 3.10 database	122.4535

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_2e)
	Purchased raw material	ABS product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1600.00	kg	Raw material acquisition record	6.0953 $kgCO_2e/kg$	Ecoinvent 3.10 database	9.7524
	Purchased raw material	BOPP tape	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	146.74	kg	Raw material acquisition record	4.3351 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.6361

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_2e)
	Purchased raw material	EAA material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	9650.00	kg	Raw material acquisition record	3.7261 $kgCO_2e/kg$	Ecoinvent 3.10 database	35.9571
	Purchased raw material	FEP material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	69023.60	kg	Raw material acquisition record	2.9196 $kgCO_2e/kg$	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_2e)
	Purchased raw material	HDPE material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3667814.00	kg	Raw material acquisition record	3.1562 $kgCO_2e/kg$	Ecoinvent 3.10 database	11576.4465
	Purchased raw material	LDPE material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	889645.00	kg	Raw material acquisition record	3.3465 $kgCO_2e/kg$	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_2e)
	Purchased raw material	PE tape	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	757.89	kg	Raw material acquisition record	4.0027 $kgCO_2e/kg$	Ecoinvent 3.10 database	3.0336
	Purchased raw material	EPE foam	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	10464.20	kg	Raw material acquisition record	4.2752 $kgCO_2e/kg$	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_2e)
	Purchased raw material	LDPE product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	87543.00	kg	Raw material acquisition record	4.8645 $kgCO_2e/kg$	Ecoinvent 3.10 database	425.8521
	Purchased raw material	LLDPE material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1244632.00	kg	Raw material acquisition record	3.0754 $kgCO_2e/kg$	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_2e)
	Purchased raw material	LSZH material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	9669816.00	kg	Raw material acquisition record	2.1529 $kgCO_2e/kg$	Ecoinvent 3.10 database	20817.8179
	Purchased raw material	PA6 product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3683.67	kg	Raw material acquisition record	10.8050 $kgCO_2e/kg$	Ecoinvent 3.10 database	39.8021

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_2e)
	Purchased raw material	PA66 product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	998815.97	kg	Raw material acquisition record	9.7477 $kgCO_2e/kg$	Ecoinvent 3.10 database	9736.1572
	Purchased raw material	PET material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	14411.47	kg	Raw material acquisition record	3.9638 $kgCO_2e/kg$	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_2e)
	Purchased raw material	PET product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	78992.55	kg	Raw material acquisition record	4.6200 $kgCO_2e/kg$	Ecoinvent 3.10 database	364.9446
	Purchased raw material	PE film	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	138910.12	kg	Raw material acquisition record	3.8907 $kgCO_2e/kg$	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_2e)
	Purchased raw material	PFA material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	125.00	kg	Raw material acquisition record	142.9938 $kgCO_2e/kg$	Ecoinvent 3.10 database	17.8742
	Purchased raw material	PO material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	2125489	kg	Raw material acquisition record	2.5188 $kgCO_2e/kg$	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_2e)
	Purchased raw material	PP material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	96628.5	kg	Raw material acquisition record	3.6789 $kgCO_2e/kg$	Ecoinvent 3.10 database	355.4863
	Purchased raw material	PP plastic strip	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	656.62	kg	Raw material acquisition record	4.3351 $kgCO_2e/kg$	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_2e)
	Purchased raw material	PP product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	40526.97	kg	Raw material acquisition record	5.1969 $kgCO_2e/kg$	Ecoinvent 3.10 database	210.6151
	Purchased raw material	PTFE material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	151885.00	kg	Raw material acquisition record	142.9938 $kgCO_2e/kg$	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_2e)
	Purchased raw material	PTFE product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	684.27	kg	Raw material acquisition record	143.6500 $kgCO_2e/kg$	Ecoinvent 3.10 database	98.2954
	Purchased raw material	PVC material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	717139.00	kg	Raw material acquisition record	2.9577 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Propane	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	546.00	kg	Raw material acquisition record	1.0829 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.5913
	Purchased raw material	Glass fiber material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	2162.20	kg	Raw material acquisition record	4.1751 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Stainless steel wire	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1822.50	kg	Raw material acquisition record	5.4931 $kgCO_2e/kg$	Ecoinvent 3.10 database	10.0112
	Purchased raw material	Stainless steel product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	5796188.07	kg	Raw material acquisition record	7.4102 $kgCO_2e/kg$	Ecoinvent 3.10 database	42951.1381

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_2e)
	Purchased raw material	Aluminum product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1529.60	kg	Raw material acquisition record	27.8737 $kgCO_2e/kg$	Ecoinvent 3.10 database	42.6357
	Purchased raw material	Aluminum strip	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1719585.50	kg	Raw material acquisition record	24.2488 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Nitrogen gas	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	15856.25	kg	Raw material acquisition record	0.4471 $kgCO_2e/kg$	Ecoinvent 3.10 database	7.0891
	Purchased raw material	Galvanized steel strip	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3095481.00	kg	Raw material acquisition record	3.0112 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Galvanized steel wire	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	7849.85	kg	Raw material acquisition record	2.9767 $kgCO_2e/kg$	Ecoinvent 3.10 database	23.3664
	Purchased raw material	Cable	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	10225216.85	kg	Raw material acquisition record	6.2823 $kgCO_2e/kg$	Ecoinvent 3.10 database	64238.2961

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_2e)
	Purchased raw material	Power supply	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	825.00	kg	Raw material acquisition record	14.2176 $kgCO_2e/kg$	Ecoinvent 3.10 database	11.7295
	Purchased raw material	Resistor	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1197.18	kg	Raw material acquisition record	29.0619 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Optical fiber	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	4157.03	kg	Raw material acquisition record	9.5412 $kgCO_2e/kg$	Ecoinvent 3.10 database	39.6629
	Purchased raw material	Carbon dioxide	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	44462.60	kg	Raw material acquisition record	0.9001 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Silicone product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	196.00	kg	Raw material acquisition record	3.6255 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.7106
	Purchased raw material	Mica strip	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3930.60	kg	Raw material acquisition record	2.5046 $kgCO_2e/kg$	Ecoinvent 3.10 database	9.8448

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_2e)
	Purchased raw material	Helium gas	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	5421.00	kg	Raw material acquisition record	6.1431 $kgCO_2e/kg$	Ecoinvent 3.10 database	33.3018
	Purchased raw material	Combiner	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	8698.35	kg	Raw material acquisition record	117.2070 $kgCO_2e/kg$	Ecoinvent 3.10 database	1019.5072

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_2e)
	Purchased raw material	Chemicals	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	2685.88	kg	Raw material acquisition record	2.8670 $kgCO_2e/kg$	Ecoinvent 3.10 database	7.7005
	Purchased raw material	Brass material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	2.81	kg	Raw material acquisition record	2.8670 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Brass product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	750478.21	kg	Raw material acquisition record	9.1348 $kgCO_2e/kg$	Ecoinvent 3.10 database	6855.4566
	Purchased raw material	Brass strip	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	4682.70	kg	Raw material acquisition record	6.4040 $kgCO_2e/kg$	Ecoinvent 3.10 database	29.9878

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_2e)
	Purchased raw material	Brass wire	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	474325.87	kg	Raw material acquisition record	6.5887 $kgCO_2e/kg$	Ecoinvent 3.10 database	3125.1957
	Purchased raw material	Methane	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3.72	kg	Raw material acquisition record	1.3774 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Plywood	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1126963.00	kg	Raw material acquisition record	0.8998 $kgCO_2e/kg$	Ecoinvent 3.10 database	1014.0485
	Purchased raw material	Metal processing	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	14161.02	kg	Raw material acquisition record	4.3206 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Poly olefin material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1160.00	kg	Raw material acquisition record	2.5188 $kgCO_2e/kg$	Ecoinvent 3.10 database	2.9218
	Purchased raw material	Aluminum alloy product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3000.00	kg	Raw material acquisition record	12.0843 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Wood pallet	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3314660.00	kg	Raw material acquisition record	0.3291 $kgCO_2e/kg$	Ecoinvent 3.10 database	1090.6983
	Purchased raw material	Nylon material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	110.30	kg	Raw material acquisition record	8.2297 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Nylon product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	206.67	kg	Raw material acquisition record	8.8859 $kgCO_2e/kg$	Ecoinvent 3.10 database	1.8364
	Purchased raw material	Kraft paper	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	491996.40	kg	Raw material acquisition record	0.9620 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Hot melt adhesive	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	68000.00	kg	Raw material acquisition record	3.4399 $kgCO_2e/kg$	Ecoinvent 3.10 database	233.9124
	Purchased raw material	Cement	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	11380.50	kg	Raw material acquisition record	0.2511 $kgCO_2e/kg$	Ecoinvent 3.10 database	2.8580

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_2e)
	Purchased raw material	Wood product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	610.00	kg	Raw material acquisition record	0.1093 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.0667
	Purchased raw material	Titanium alloy product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	8899.44	kg	Raw material acquisition record	49.3481 $kgCO_2e/kg$	Ecoinvent 3.10 database	439.1707

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_2e)
	Purchased raw material	Carbon steel strip	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	4280.00	kg	Raw material acquisition record	2.3472 $kgCO_2e/kg$	Ecoinvent 3.10 database	10.0459
	Purchased raw material	Carbon steel wire	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	111882.40	kg	Raw material acquisition record	2.3126 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Carbon steel product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	7463.65	kg	Raw material acquisition record	4.2298 $kgCO_2e/kg$	Ecoinvent 3.10 database	31.5697
	Purchased raw material	Steel-copper wire	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3114.63	kg	Raw material acquisition record	3.7897 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Steel-aluminum wire	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	2456593.70	kg	Raw material acquisition record	21.0049 $kgCO_2e/kg$	Ecoinvent 3.10 database	51600.4997
	Purchased raw material	Steel-aluminum magnesium wire	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1309.05	kg	Raw material acquisition record	8.7365 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Corrugated board	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	203175.50	kg	Raw material acquisition record	1.2765 $kgCO_2e/kg$	Ecoinvent 3.10 database	259.3501
	Purchased raw material	Cable connector	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	531268.40	kg	Raw material acquisition record	7.3667 $kgCO_2e/kg$	Ecoinvent 3.10 database	3913.6948

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_2e)
	Purchased raw material	Passive electronic component	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	140676.87	kg	Raw material acquisition record	63.7453 $kgCO_2e/kg$	Ecoinvent 3.10 database	8967.4962
	Purchased raw material	Solder material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	59600.00	kg	Raw material acquisition record	28.8498 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Rubber	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	60.00	kg	Raw material acquisition record	3.4168 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.2050
	Purchased raw material	Argon gas	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	61776.93	kg	Raw material acquisition record	2.5263 $kgCO_2e/kg$	Ecoinvent 3.10 database	156.0685

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_2e)
	Purchased raw material	Zinc oxide	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	44826.56	kg	Raw material acquisition record	0.7497 $kgCO_2e/kg$	Ecoinvent 3.10 database	33.6051
	Purchased raw material	Oxygen gas	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	136.00	kg	Raw material acquisition record	1.1268 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Ethanol	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	330.00	kg	Raw material acquisition record	0.7000 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.2310
	Purchased raw material	Acetylene	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	30.00	kg	Raw material acquisition record	2.5385 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Isopropanol	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	7240.00	kg	Raw material acquisition record	3.3103 $kgCO_2e/kg$	Ecoinvent 3.10 database	23.9667
	Purchased raw material	Toner ink	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	225.45	kg	Raw material acquisition record	5.8351 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Active electronic component	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1178.40	kg	Raw material acquisition record	1273.7223 $kgCO_2e/kg$	Ecoinvent 3.10 database	1500.9543
	Purchased raw material	Grease	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	33085.00	kg	Raw material acquisition record	2.7555 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Paper product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1.00	kg	Raw material acquisition record	0.9620 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.0010
	Purchased raw material	Bamboo product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	102843.32	kg	Raw material acquisition record	0.6262 $kgCO_2e/kg$	Ecoinvent 3.10 database	64.4002

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_2e)
	Purchased raw material	Copper-plastic product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	670.00	kg	Raw material acquisition record	76.5347 $kgCO_2e/kg$	Ecoinvent 3.10 database	51.2782
	Purchased raw material	Anode copper material	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	3195.78	kg	Raw material acquisition record	8.5576 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Anode copper product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1515352.60	kg	Raw material acquisition record	11.8994 $kgCO_2e/kg$	Ecoinvent 3.10 database	18031.7812
	Purchased raw material	Anode copper strip	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	7163355.21	kg	Raw material acquisition record	9.1686 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Anode copper wire	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	1862148.51	kg	Raw material acquisition record	9.3533 $kgCO_2e/kg$	Ecoinvent 3.10 database	17417.2752
	Purchased raw material	Aluminum-plastic product	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	171075.11	kg	Raw material acquisition record	20.9062 $kgCO_2e/kg$	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_2e)
	Purchased raw material	Indoor antenna	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	28799.48	kg	Raw material acquisition record	5.4404 $kgCO_2e/kg$	Ecoinvent 3.10 database	156.6816
	Purchased raw material	Outdoor antenna	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	6.88	kg	Raw material acquisition record	9.3122 $kgCO_2e/kg$	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_2e)
	Solid waste treatment	Cable treatment	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	305569.77	kg	2024 solid waste inventory record	0.9103 $kgCO_2e/kg$	Ecoinvent 3.10 database	278.1685
	Solid waste treatment	Steel recycle	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	85285.00	kg	2024 solid waste inventory record	0.0000 $kgCO_2e/kg$	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_2e)
	Solid waste treatment	Copper recycle	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	460043.01	kg	2024 solid waste inventory record	0.0000 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.0000
	Solid waste treatment	Aluminum recycle	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	75835.03	kg	2024 solid waste inventory record	0.0000 $kgCO_2e/kg$	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_2e)
	Solid waste treatment	Equipment recycle	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	7340.00	kg	2024 solid waste inventory record	0.0000 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.0000
	Solid waste treatment	Plastic recycle	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	244959.93	kg	2024 solid waste inventory record	0.0000 $kgCO_2e/kg$	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_2e)
	Solid waste treatment	Paper board recycle	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	51984.00	kg	2024 solid waste inventory record	0.0000 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.0000
	Solid waste treatment	Wood recycle	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	182100.00	kg	2024 solid waste inventory record	0.0000 $kgCO_2e/kg$	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_2e)
	Hazardous waste treatment	Waste bucket treatment	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	3.95	t	2024 hazardous waste transfer joint order	2.5237 $kgCO_2e/kg$	Ecoinvent 3.10 database	9.9659
	Hazardous waste treatment	Saponified liquid treatment	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	2.28	t	2024 hazardous waste transfer joint order	2.5237 $kgCO_2e/kg$	Ecoinvent 3.10 database	5.7539

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_2e)
	Hazardous waste treatment	Waste grease treatment	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	2.14	t	2024 hazardous waste transfer joint order	2.5237 $kgCO_2e/kg$	Ecoinvent 3.10 database	5.4006
	Hazardous waste treatment	Waste activated carbon treatment	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	4.45	t	2024 hazardous waste transfer joint order	2.5237 $kgCO_2e/kg$	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_2e)
	Wastewater treatment	Wastewater treatment	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	15232.73	m^3	Water balance schematic	0.2921 $kgCO_2e/m^3$	Ecoinvent 3.10 database	4.4493
	Diesel	Diesel upstream	Goods, services and capital goods: ☐ Supplier-specific method ☐ Hybrid method ☒ Average-data method ☐ Spend-based method ☐ Not applicable	13596.895	kg	2024 diesel purchase record	0.9416 $kgCO_2e/kg$	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_2e)
	Imported electricity	Electricity upstream production	Electricity and heat: ☒ Location-based method ☐ Market-based method	13898621.00	kWh	Enterprise's power statistics	98.9000 gCO_2e/kWh	Life cycle upstream emission factor of China, 2022 estimated, from *Life cycle Upstream Emission Factors 2023 (Pilot Edition)* by IEA	1374.5736
	Imported electricity	Electricity transmission and distribution loss	Electricity and heat: ☒ Location-based method ☐ Market-based method	15896541.00	kWh	Enterprise's power statistics	29.1000 gCO_2e/kWh	Life cycle transmission and distribution emission factor of China, 2021, from *Life cycle Upstream Emission Factors 2023 (Pilot Edition)* by IEA	462.5893
	Imported electricity	Photovoltaic electricity	Electricity and heat: ☒ Location-based method ☐ Market-based method	2577787.00	kWh	Enterprise's power statistics	0.0790 $kgCO_2e$/kWh	Ecoinvent 3.10 database	203.6972

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_2e)
Category 5: indirect GHG emissions associated with the use of products from the organization	Product disposal	Waste ABS	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	640.00	kg	Raw material acquisition record	2.3799 $kgCO_2e/kg$	Ecoinvent 3.10 database	1.5232
	Product disposal	Waste PP	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	55183.53	kg	Raw material acquisition record	2.6179 $kgCO_2e/kg$	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_2e)
	Product disposal	Waste rubber	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	30.00	kg	Raw material acquisition record	3.1577 $kgCO_2e/kg$	Ecoinvent 3.10 database	0.0947
	Product disposal	Other waste plastics	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	9945465.74	kg	Raw material acquisition record	2.3799 $kgCO_2e/kg$	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_2e)
	Product disposal	Waste electronic component	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	743444.20	kg	Raw material acquisition record	1.0655 $kgCO_2e/kg$	Ecoinvent 3.10 database	792.1635
	Product disposal	Waste wood	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	2221116.50	kg	Raw material acquisition record	0.0156 $kgCO_2e/kg$	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_2e)
	Product disposal	Waste paper	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	695172.90	kg	Raw material acquisition record	0.0335 $kgCO_2e/kg$	Ecoinvent 3.10 database	23.2878
	Product disposal	Waste cable	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	10225216.85	kg	Raw material acquisition record	0.9103 $kgCO_2e/kg$	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_2e)
	Product disposal	Waste steel	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	1802998.94	kg	Raw material acquisition record	0.0186 $kgCO_2e/kg$	Ecoinvent 3.10 database	33.5421
	Product disposal	Waste aluminum	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	517234.53	kg	Raw material acquisition record	0.0261 $kgCO_2e/kg$	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_2e)
	Product disposal	Waste copper	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	4709416.68	kg	Raw material acquisition record	0.0234 $kgCO_2e/kg$	Ecoinvent 3.10 database	110.1286
	Product disposal	Other waste metal	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	21490.40	kg	Raw material acquisition record	0.5189 $kgCO_2e/kg$	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_2e)
	Product disposal	Metal-plastic mixed waste	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	1197705.98	kg	Raw material acquisition record	0.5189 $kgCO_2e/kg$	Ecoinvent 3.10 database	621.5466
	Product disposal	Other waste	Waste: ☐ Supplier-specific method ☐ Waste-type-specific method ☒ Average-data method ☐ Not applicable	235905.98	kg	Raw material acquisition record	0.5189 $kgCO_2e/kg$	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_2e)
	Product disposal transportation	Waste transportation	Transportation, travel and commuting: ☐ Fuel-based method ☒ Distance-based method ☐ Spend-based method ☐ Not applicable	6160831.94	tkm	Raw material acquisition record	0.1070 $kgCO_2e$/tkm	Ecoinvent 3.10 database	658.9617
Category 6: indirect GHG emissions from other sources	/	/	Other emission: ☐ Site-specific method ☐ Average-data method ☒ 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_2O	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 1	Category 2	Category 3	Category 4	Category 5	Category 6	Total (tCO_2e/Year)
Non-biogenic CO_2	89.1860	7483.0827	23451.2019	432536.2641	35545.1321	0.0000	499211.0385
Anthropogenic biogenic CO_2	0.0000	0.0000					
Non-biogenic CH_4	0.0671	0.0000					
Anthropogenic biogenic CH_4e	64.8893	0.0000					
Non-biogenic N_2O	4.5280	0.0000					
Anthropogenic biogenic N_2O	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	23451.2019	432536.2641	35545.1321	0.0000	499146.1492

Anthropogenic biogenic CO_2 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	- 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	- Among the emission categories, category 4 is the largest emission category, accounting for about 86.64%. - Among category 1, CH_4 is the largest emission GHG, mainly from septic tank fugitive emission - Among category 2, CO_2 is the largest emission GHG, mainly from grid electricity emission

Uncertainty analysis

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.

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_2e)	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_2e)	Emission proportion	Weighted average score
3	Propane	Propane combustion	3	1	3	2.33	1.6380	0.00%	0.0000
4	Methane	Methane combustion	3	1	3	2.33	0.0102	0.00%	0.0000
5	R32	Air conditioning	3	1	3	2.33	1.7513	0.00%	0.0000
6	R410A	Air conditioning	3	1	3	2.33	34.6479	0.01%	0.0002
7	HFC-227ea	Fire extinguisher	3	1	3	2.33	0.2880	0.00%	0.0000
8	Carbon dioxide	Fire extinguisher	3	1	3	2.33	0.0005	0.00%	0.0000
9	Carbon dioxide	Gas usage	3	1	3	2.33	44.4626	0.01%	0.0002
10	Septic-tank	Septic-tank	1	1	3	1.67	64.8893	1.50%	0.0250
11	Imported electricity	Grid electricity	3	2	3	2.67	7483.0827	0.00%	0.0000
12	Imported electricity	Zhongtian Photovoltaic Technology Co., Ltd. sourced electricity	3	2	3	2.67	0.0000	0.00%	0.0000
13	Imported electricity	Rooftop photovoltaic electricity	3	2	3	2.67	0.0000	0.01%	0.0003

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	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_2e)	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 data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	Emission proportion	Weighted average score
30	Downstream material transportation	Downstream material road transportation >32t	3	1	3	2.33	1544.3551	0.31%	0.0072
31	Production equipment	Production equipment cost	3	2	3	2.67	2490.1583	0.50%	0.0133
32	Office equipment	Computer	3	1	3	2.33	32.6133	0.01%	0.0002
33	Office equipment	Printer	3	1	3	2.33	0.3273	0.00%	0.0000
34	Office equipment	Stationery	3	2	3	2.67	18.2807	0.00%	0.0001
35	Purchased service	Dining cost	3	2	3	2.67	97.8039	0.02%	0.0005
36	Purchased service	Processing service	3	2	3	2.67	343.9419	0.07%	0.0018
37	Purchased living products	Drinking water	3	2	3	2.67	63.0959	0.01%	0.0003
38	Tap water	Tap water	3	1	3	2.33	122.4535	0.02%	0.0006
39	Purchased raw material	ABS product	3	1	3	2.33	9.7524	0.00%	0.0000
40	Purchased raw material	BOPP tape	3	1	3	2.33	0.6361	0.00%	0.0000
41	Purchased raw material	EAA material	3	1	3	2.33	35.9571	0.01%	0.0002

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	Emission proportion	Weighted average score
42	Purchased raw material	FEP material	3	1	3	2.33	201.5201	0.04%	0.0009
43	Purchased raw material	HDPE material	3	1	3	2.33	11576.4465	2.32%	0.0540
44	Purchased raw material	LDPE material	3	1	3	2.33	2977.1738	0.60%	0.0139
45	Purchased raw material	PE tape	3	1	3	2.33	3.0336	0.00%	0.0000
46	Purchased raw material	EPE foam	3	1	3	2.33	44.7369	0.01%	0.0002
47	Purchased raw material	LDPE product	3	1	3	2.33	425.8521	0.09%	0.0020
48	Purchased raw material	LLDPE material	3	1	3	2.33	3827.7994	0.77%	0.0179
49	Purchased raw material	LSZH material	3	1	3	2.33	20817.8179	4.17%	0.0972
50	Purchased raw material	PA6 product	3	1	3	2.33	39.8021	0.01%	0.0002
51	Purchased raw material	PA66 product	3	1	3	2.33	9736.1572	1.95%	0.0454
52	Purchased raw material	PET material	3	1	3	2.33	57.1243	0.01%	0.0003

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	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	5353.7377	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_2e)	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_2e)	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_2e)	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	0.09%	0.0022
95	Purchased raw material	Hot melt adhesive	3	1	3	2.33	233.9124	0.05%	0.0011
96	Purchased raw material	Cement	3	1	3	2.33	2.8580	0.00%	0.0000

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	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 raw material	Carbon steel strip	3	1	3	2.33	10.0459	0.00%	0.0000
100	Purchased raw material	Carbon steel wire	3	1	3	2.33	258.7444	0.05%	0.0012
101	Purchased raw material	Carbon steel product	3	1	3	2.33	31.5697	0.01%	0.0001
102	Purchased raw material	Steel-copper wire	3	1	3	2.33	11.8036	0.00%	0.0001
103	Purchased raw material	Steel-aluminum wire	3	1	3	2.33	51600.4997	10.34%	0.2409
104	Purchased raw material	Steel-aluminum magnesium wire	3	1	3	2.33	11.4365	0.00%	0.0001
105	Purchased raw material	Corrugated board	3	1	3	2.33	259.3501	0.05%	0.0012
106	Purchased raw material	Cable connector	3	1	3	2.33	3913.6948	0.78%	0.0183

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	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	Isopropanol	3	1	3	2.33	23.9667	0.00%	0.0001
116	Purchased raw material	Toner ink	3	1	3	2.33	1.3155	0.00%	0.0000
117	Purchased raw material	Active electronic component	3	1	3	2.33	1500.9543	0.30%	0.0070

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	Emission proportion	Weighted average score
118	Purchased raw material	Grease	3	1	3	2.33	91.1655	0.02%	0.0004
119	Purchased raw material	Paper product	3	1	3	2.33	0.0010	0.00%	0.0000
120	Purchased raw material	Bamboo product	3	1	3	2.33	64.4002	0.01%	0.0003
121	Purchased raw material	Copper-plastic product	3	1	3	2.33	51.2782	0.01%	0.0002
122	Purchased raw material	Anode copper material	3	1	3	2.33	27.3481	0.01%	0.0001
123	Purchased raw material	Anode copper product	3	1	3	2.33	18031.7812	3.61%	0.0842
124	Purchased raw material	Anode copper strip	3	1	3	2.33	65677.7334	13.16%	0.3066
125	Purchased raw material	Anode copper wire	3	1	3	2.33	17417.2752	3.49%	0.0813
126	Purchased raw material	Aluminum-plastic product	3	1	3	2.33	3576.5329	0.72%	0.0167
127	Purchased raw material	Indoor antenna	3	1	3	2.33	156.6816	0.03%	0.0007
128	Purchased raw material	Outdoor antenna	3	1	3	2.33	0.0640	0.00%	0.0000

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	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	3	1	3	2.33	0.0000	0.00%	0.0000
131	Solid waste treatment	Copper recycle	3	1	3	2.33	0.0000	0.00%	0.0000
132	Solid waste treatment	Aluminum recycle	3	1	3	2.33	0.0000	0.00%	0.0000
133	Solid waste treatment	Equipment recycle	3	1	3	2.33	0.0000	0.00%	0.0000
134	Solid waste treatment	Plastic recycle	3	1	3	2.33	0.0000	0.00%	0.0000
135	Solid waste treatment	Paper board recycle	3	1	3	2.33	0.0000	0.00%	0.0000
136	Solid waste treatment	Wood recycle	3	1	3	2.33	0.0000	0.00%	0.0000
137	Hazardous waste treatment	Waste bucket treatment	3	1	3	2.33	9.9659	0.00%	0.0000
138	Hazardous waste treatment	Saponified liquid treatment	3	1	3	2.33	5.7539	0.00%	0.0000
139	Hazardous waste treatment	Waste grease treatment	3	1	3	2.33	5.4006	0.00%	0.0000

No.	Emission categories	Facilities	Activity data categories	Emission factor categories	Instrument calibration categories	Average score	Total emission (tCO_2e)	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	3	1	3	2.33	12.8027	0.00%	0.0001
143	Imported electricity	Electricity upstream production	3	2	3	2.67	1374.5736	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_2e)	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	122.4228	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	- 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

Material discrepancy
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 tCO_2e, and the emissions reported by the greenhouse gas inventory were 499211.0385 tCO_2e. Therefore, the material deviation claimed by the responsible party is within the material threshold of verification.

3.3. Assessment of changes from prior period

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.

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 greenhouse gas statements*

Verification team qualifications:

Team leader Johny Wang:

温室气体管理师能力评价证书

王宁

WANG NING

经中国认证认可协会（CCAA）评价，符合《温室气体管理师评价规范》要求，特发此证。

身份证号：622301199306141350
证书编号：2025-CCAA-GHG1-1555053
有效日期：2025-05-20至2028-05-19
证书级别：正式初次申请

秘书长：黄继先
Secretary General: Huang Ji Xian

中国认证认可协会

证书查询：http://www.ccaa.org.cn

Team member Tony Sun:

温室气体管理师能力评价证书

孙思扬

SUN SI YANG

经中国认证认可协会（CCAA）评价，符合《温室气体管理师评价规范》要求，特发此证。

身份证号：350204199607286517
证书编号：2025-CCAA-GHGO-1444409
有效日期：2025-05-29至2028-05-28
证书级别：实习初次申请

秘书长：黄继先
Secretary General: Huang Ji Xian

中国认证认可协会

证书查询：http://www.ccaa.org.cn

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