SIKA METHODOLOGY FOR SCOPE 3 EMISSIONS CALCULATION

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BUILDING TRUST

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OUTLINE

The calculation of scope 3 carbon emissions is an evolving topic based on various data sources. Sika is continuously reviewing the calculation methodology to ensure transparency and data robustness. This process helps Sika better understand how it can lower its scope 3 emissions and engage within the organization. Better knowledge, understanding, and data availability will impact Sika's accounting methodology in its net zero journey. Moreover, the identification of material scope 3 categories provides detailed information to drive scope 3 reduction initiatives.

This document is a high-level summary of the methodology applied by Sika to calculate its scope 3 greenhouse gas (GHG) emissions.

The scope 3 assessment project is aligned to the recommendations outlined in the "Corporate Value Chain (Scope 3) Accounting and Reporting Standard" and the "Technical guidance for calculating scope 3 emissions" published by the World Resource Institute (WRI)[1] and World Business Council for Sustainable Development (WBCSD)[2] as a supplement to the Greenhouse Gas Protocol (GHGP)[3]. Additional guidelines used or consulted during the process are referenced in the document.

The assessment covers all entities consolidated in the Group financial statements for FY 2022. Exclusions relevant for specific categories are listed in the separate data quality and coverage section. An operational control approach, as defined by the GHGP[4], was applied during the assessment. This approach considers a company accountable for 100% of the emissions over which the organization or any of its subsidiaries have operational control.

The Sika Scope 3 emissions assessment project took place between January 2021 and January 2023, and it was divided into:

Phase 1: in 2021, Sika completed its first comprehensive scope 3 GHG emissions assessment for the FY 2020 which included the following scope 3 categories:

- **Category 1** – Purchased goods and services
- **Category 2** – Capital goods
- **Category 4** – Upstream transportation and distribution
- **Category 5** – Waste generated in operations
- **Category 6** – Business travel
- **Category 9** – Downstream transportation and distribution
- **Category 11** – Use of sold products
- **Category 12** – End-of-Life (EoL) treatment of sold products

Phase 2: in 2022, to cover 90% of all Sika scope 3 emissions, as required by the Science Based Target initiative (SBTi)[5], and to strengthen the methodological approach for developing a net zero strategy, Sika expanded the list of scope 3 categories by adding additional ones and further developing the related methodologies. According to the Net Zero Standard of the SBTi "companies must develop a complete scope 3 inventory, which is critical for identifying emission hotspots, reduction opportunities, and areas of risk up and down the value chain". As a result, the following categories were added to the previous list:

- **Category 3** – Fuel- and energy-related activities
- **Category 7** – Employee commuting
- **Category 8** – Upstream leased assets

Taking into consideration this new scope, phase 2 included a scope 3 assessent for the FY 2021.

Phase 3: in 2023, as part of the yearly closing, Sika completed a comprehensive scope 3 GHG emissions assessment for the FY 2022. This assessment is included in the annual sustainability report. This phase included the following updates to the methodology:

- **Category 1** – Switch of emission factor database from Ecoinvent to Sphera which increased the coverage to 93% of the relevant quantities
- **Category 6** – Extended to include rental cars
- **Category 7** – Methodology was aligned to category 4
- **Category 7** – Average-data method applied for packaging

In the chapter "Material scope 3 categories", dedicated sections describe the applied methodology and assumptions made for each material scope 3 category. In the chapter "GHG emissions calculation methodology for material scope 3 categories", criteria for excluded categories are explained. Moreover, the chapter "Overview and screening" provides information on data used for the scope 3 assessment (data input), exclusions within material categories (coverage), and limitations in data quality.

1 **World Resources Institute**
2 **World Business Council For Sustainable Development (WBCSD)**
3 **Corporate Value Chain (Scope 3) Standard | Greenhouse Gas Protocol**
4 **Corporate Standard | Greenhouse Gas Protocol**
5 Specifically, long-term targets must cover 90% of scope 3 emissions to be aligned with the SBTi.

MATERIAL SCOPE 3 CATEGORIES

In alignment with the WBCSD sector guidance, a screening of all material categories was conducted. Each category was rated with respect to Sika's influence on the emissions and its size. The related symbols shown in the table below are used to:

- label all categories into low, medium, or large influence. It appears in fact that an assessment of influence helps to develop a scope 3 methodology that balances between measuring, reporting, and managing material scope 3 emissions in alignment with any emission reduction strategy;
- indicate the size of each category as the percentage contribution to the full scope 3 inventory.

Category	Description	Influence	Size
Purchased goods and services	Upstream emissions (cradle¬to-gate) of raw materials, trading products and packaging purchased or acquired by Sika in the reporting year		
Capital goods	Upstream emissions from the production of capital goods purchased or acquired by Sika in the reporting year		
Fuel- and energy-related activities	Extraction, production, and transportation of fuels and energy purchased by Sika in the reporting year, not already accounted for in scope 1 or scope 2		
Upstream transportation and distribution	Transportation and distribution services purchased by Sika, including inbound logistic, outbound logistic (e.g., of sold products), and transportation and distribution between Sika's own facilities (in vehicles and facilities not owned or controlled by Sika)		
Waste generated in operations	Disposal and treatment of waste generated in Sika's operations in the reporting year (in facilities not owned or controlled by Sika)		
Business travel	Transportation of employees for business¬related activities (air, train, rail, etc.) during the reporting year (in vehicles not owned or operated by Sika)		
Employee commuting	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by Sika)		
Upstream leased assets	The life cycle emissions associated with manufacturing or constructing leased assets purchased or acquired by Sika in the reporting year		
Downstream transportation and distribution	Transportation and distribution of products sold by Sika between Sika's operations and end consumers (if not paid for by Sika), including retail and storage (in vehicles and facilities not owned or controlled by Sika)		
Use of sold products	The scope 1 and scope 2 emissions of end users that occur from the use of: products that directly consume energy (fuels or electricity) during use; fuels and feedstocks; and GHGs (Greenhouse Gas) and products that contain or form GHGs that are emitted during use		
End-of-life treatment of sold products	Waste disposal and treatment of products and packaging sold by Sika (in the reporting year) at the end of their life		

 **Large influence on emissions**

 **Medium influence on emissions**

 Small influence on emissions

 **> 50% coverage of scope 3 emissions**

 **5%–49% coverage of scope 3 emissions**

 < 5% coverage of scope 3 emissions

GHG EMISSIONS CALCULATION METHODOLOGY FOR MATERIAL SCOPE 3 CATEGORIES

The GHG emissions topic is continuously evolving, and better knowledge, understanding, and data availability will impact the accuracy and granularity of Sika's scope 3 assessment. For each scope 3 category, a specific methodology, based on the GHGP and the WBCSD chemical sector guidance, has been defined. However, as specifications and availability of both activity and secondary data change, Sika expects scope 3 categories' methodologies to continuously evolve.

Additionally, the SBTi will publish its Sectoral Decarbonization Approach (SDA) for the chemical sector which will define the realistic reduction pathways to reach net zero in 2050. The chemical and the cement sectors are expected to decarbonize less rapidly than the SBT (ScienceBased Targets) Net Zero absolute contraction trajectory. Methodologies to calculate decarbonization pathways and the related accounting of emissions are continuously evolving.

Sika believes the requirements and guidance to calculate a scope 3 inventory will progress based on increasing knowledge and information becoming available over time. For such reason, Sika actively reviews its methodology by participating in various initiatives, such as:

- Together for Sustainability (TfS)[6] workstream on scope 3 GHG emissions, with overall project leadership and active involvement in working groups on methodological approaches, datasharing solutions and supplier engagement;
- WBCSD SOS 1.5 Partnership for Carbon Transparency (PACT)[7]
- Participation in consultation processes on reporting approaches and standards: In 2022, Sika contributed to the review of the GHGP Land Sector and Removals Guidance[1], which provides guidance on the accounting and reporting of CO_2 removals and storage within corporate inventories

Sika has identified the following material scope 3 categories and, where necessary, next steps or "Roadmaps" for improving data quality are described.

Category 1
Purchased goods and services

The calculation of upstream GHG emissions (cradle-to-gate) of purchased goods and services were structured based on:

- **1. Raw materials:** for all raw materials, the average-data method was applied. Emission factors were obtained from life cycle inventory databases. The obtained emission factors were mapped to chemical components using the information available in Sika's Environmental Health and Safety (EHS) database (ie CAS numbers). Technological representativeness was considered where possible. Geographical representativeness was considered when the country of the supplier[8] was available in the procurement management system. When a specific chemical was not available in the life cycle inventory databases, relevant proxies were chosen. Research & Development (R&D) experts reviewed the mapping of emission factors to ensure data governance. The emission factors were used to calculate the kilograms CO_2eq for each chemical component and then aggregated to calculate the kg CO_2eq per purchased raw material since each purchased raw material can consist of one or more chemical components. Finally, the calculated kilograms of CO_2eq were multiplied by the purchased quantities for the full year. Raw materials that generally occur in very low percentages in Sika's products (<2%) were excluded from the chemical component mapping exercise. For these materials a generic emission factor was chosen as a proxy. Where available (0.66% of invoiced quantities) supplier-specific emission factors were applied. The mapping of emission factors was completed for the top 93% (measured by invoiced quantity) of materials. An extrapolation of GHG emissions to the remaining materials was carried out, by considering the average CO_2eq intensity of each material eClass[9]. There was no extrapolation done for companies not included in the general spend management system, representing less than 5% of global procurement spends.

- **2. Trading products and packaging:** for the calculation of upstream emissions of trading products and purchased packaging, a spend-based methodology was applied. The procurement spend in CHF was multiplied with the relevant monetary emission factor. Trading products and purchased packaging were grouped to match the available categories relevant for the monetary emission factors.

6 **TfS Initiative**
7 **WBCSD – Partnership for Carbon Transparency (PACT)**
8 Country of the supplier may refer to the HQ location of the legal entity.
9 Materials are classified into eClasses by Procurement. EClass refers to the most granular segmentation available and is based on chemical functions.

– **3. Indirect goods:** for the calculation of indirect goods, a spend-based methodology was applied. The procurement spend in CHF was multiplied with the relevant monetary emission factor.

Roadmap: in the short term, the focus will be on improvements in the data quality (conversion factors, quantities, location, invoice entries) of purchasing data. Including the implementation of further controls to eliminate any duplicate entries (or similar issues) in Sika's general spend management system. In the longterm, Sika aims for supplier-specific data. Sika is part of TfS and is currently chairing TfS workstream 5: scope 3 GHG emissions. In scope of this workstream, Sika supports the work to standardize the measurement of GHG emissions data and to develop data collection and sharing approaches to support efforts to decarbonize the chemical supply chain. Finally, Sika executes continuous review by R&D and procurement to identify issues with data quality.

Category 2
Capital goods

For the calculation of GHG emissions associated with capital goods, a spend-based methodology was applied. The CAPEX (capital expenditure) in CHF was multiplied with the relevant monetary emission factor. For all infrastructure projects, a mixed monetary emission factor was calculated. This mixed factor was based on the ratio of steel, concrete, earthworks, and electrical installations within a Sika plant. The ratio was determined from an analysis of representative Sika plant construction projects.

Category 3
Fuel- and energy-related activities

GHG emissions associated with fuel and energy-related activities were based on data obtained from the Sika Sustainability and Operations (S&O) corporate reporting system. To calculate the fuel related Well-to-Tank (WTT) emissions, the Group consumption per fuel category – collected at factory level through the quarterly Sika S&O corporate reporting system – was multiplied with the chosen WTT emission factor. For electricity Transmission & Distribution (T&D) losses, the electricity consumption per Sika country was multiplied with the relevant country based emission factors. Emissions from upstream production and transportation of purchased electricity were calculated by multiplying the electricity consumption with the relevant country based emission factor.

Category 4
Upstream transportation and distribution

Total GHG emissions from upstream transportation were calculated by multiplying the tons purchased with the kilometers shipped and with the relevant emission factors, taking geographical differences into consideration. Supplier postal codes[10] were extracted from SAP from purchasing invoices. The land distance between the two relevant postal codes was calculated using an automated distance calculation solution (BING). The obtained ton.kms were multiplied with a regionalized emission factor. Tons shipped were based on quantities purchased as reported in the procurement general spend management (GSM) system.

If both supplier and Sika factory are located in the same region, it was assumed that transportation was conducted by truck. If supplier and Sika factory are located in two different regions, it was assumed that the transportation was carried out by truck and vessel. The total distance was calculated in three legs: supplier to default port, vessel distance, default port to Sika factory. Each country was assigned a default port. The vessel distances were estimated using proxy routes between relevant geographical regions[11]. In each leg the ton.kms were multiplied with a regionalized emission factor.

For all intraregional distances calculated for SAP transactions, an average distance per material group was calculated and applied to non-SAP transactions as default distances. Postal code data from SAP transactions was available for 25 % of all quantities purchased. The default distances were applied to the remaining 85 % of quantities purchased. Due to significant data gaps, total emissions from inbound transporation are currently a rough estimate.

In accordance with the GHGP guidelines, the outbound transportation paid by Sika is included in category 4, whereas the outbound transportation paid by customers falls under category 9. For the methodology applied to calculate the outbound transportation paid by Sika, please refer to the section describing category 9.

Roadmap: in the short term, the focus will be on improvements in the data quality (conversion factors, quantities, location, invoice entries) of purchasing data. Including the implementation of further controls to eliminate any duplicate entries (or similar issues) in Sika's general spend management system. Additionally, improvement and maintenance of local master data to improve the transparency and coverage of the locations of Sika raw material suppliers will be addressed.

10 The supplier postal code may refer to the HQ location of the legal entity and not to the production site.

11 The distances of proxy routes were calculated using the tool **Online Freight Shipping & Transit Time Calculator at Searates.com.** A 15 % uplift was applied to all distances- in alignment with the GLEC framework.

Category 5
Waste generated in operations

GHG emissions from waste treatment were based on data obtained from the Sika S&O corporate reporting system. Waste by weight was collected at factory level through the quarterly Sika corporate reporting system. This reporting includes production waste and non-production waste. The waste is categorized based on destination (landfill, incineration, reuse) and type (hazardous, non-hazardous). The destination "reuse" refers to recycling and reuse in external facilities. The weight of waste allocated to relevant destinations was multiplied with appropriate emission factors. For recycled waste, average emission factors for transportation to recycling facility gate were applied.

Roadmap: In the medium-run, collect additional insights and data on incineration with or without energy recovery.

Category 6
Business travel

The GHG emissions for category 6 are based on the activity data collected from the main high-spend countries[12] (US, China, Switzerland, France, Germany, Spain, Mexico and Australia). The activity data collected included the passenger kilometers of all air travels and the expenditure on car rentals.

For air travels, a distance-based approach was applied. The passenger kilometers were multiplied with a relevant emission factor[13] per type of flight distances: domestic, short-haul and long-haul. An average passenger class was considered. The top eight countries used for the air travel emissions estimation cover 54% of the Sika Group business travel expenditures for FY 2022. The data was extrapolated to 100% to provide an estimate for the full Group.

For car rentals, a spend-based approach was applied. The monetary amount spent on car rentals was multiplied with a relevant monetary emission factor. The top seven countries[14] used for the rental cars emissions estimation cover 51% of the Sika Group business travel expenditures for FY 2022. The data was extrapolated to 100% to provide an estimate for the full Group.

Roadmap: coverage will be extended to collect activity data from more Sika countries.

Category 7
Employee commuting

The GHG emissions associated with employee commuting are estimated with fulltime equivalents (FTEs). FTEs are reported and compiled within the corporate reporting system. FTEs include both Sika employees and external temporaries, but exclude contractors. In alignment with the WBCSD sector guidance, the following assumptions were made:

- Default mode of 100% travel by car (1 employee per car)
- Default average number of trips as 440 (220 working days * 2 = 440 trips)
- All Sika Services entities related to Corporate Departments were considered to include 40% home office in 2022
- Default travel distance of 30 kilometers (per trip) by car
- Diesel was considered as the fuel used and the relevant emission factor was applied

Roadmap: the methodology will be reviewed and, if possible, a location-specific approach will be applied in the long term. Potential employee surveys will support the methodology review.

12 For the United States, Sika Corporation only. For China, Sika China Ltd. Only. For Mexico, Sika Mexicana SA de CV only.
13 With radiative forcing.
14 Excluding Sika China.

Category 8
Upstream leased assets

GHG emissions from leased assets were calculated in the same way as category 2 – capital goods, using a spend-based approach. Operations of assets leased by the reporting company in the reporting year (e.g., fuels used) are included in scope 1 and 2. Category 8 includes the upstream life cycle emissions of manufacturing or construction of leased assets. The spend categories associated with leased assets used for the calculation include:

- Leased heavy machinery and factory equipment
- Leased motor vehicles
- Leased IT hardware
- Leased other equipment

Category 9
Downstream transportation and distribution

Category 9 reflects all outbound transportation to 3rd party customers, as well as intercompany transportation to warehouses and distribution facilities. This category was calculated analog to category 4. Total GHG emissions were calculated by multiplying the tons sold with the kilometers shipped and with the relevant emission factors, taking geographical differences into consideration. At this stage, it was assumed that all goods are transported by truck and/or vessel.

Customer postal codes were extracted from sales invoices. The land distance between the two relevant postal codes was calculated using an automated distance calculation solution (BING). The obtained ton.kms were multiplied with a regionalized emission factor. Tons shipped were based on quantities consolidated in the general sales query and validated at entity level with total volumes sold reported in monthly operational reporting. Data gaps were filled with additional requests for specific entities[15]. Intercompany transactions were included in the tons shipped. Postal code information was obtained for 84 % of the quantities sold. The remaining quantities were included in the assessment with a simple extrapolation of total emissions.

If both Sika and customer shipping locations are in the same region, it was assumed that transportation was conducted by truck only. If Sika and customer delivery point are located in two different regions, it was assumed that the transportation was carried out by truck and vessel. The total distance was calculated in three legs; Sika to default port, vessel distance, default port to end customer. Each country was assigned a default port. The vessel distances were estimated based on a proxy route between relevant geographical regions[16].

The information on outbound logistic was provided for both transportation activities paid by Sika (Delivery at Place – DAP) and transportation activities paid by the customer (Ex Works – EXW). For entities where incoterms were not available at corporate level, an assumption per country was taken on the ratio between DAP and EXW outbound transactions. This assumption was based on data collected by local controllers for the FY 2021. In accordance with the GHGP guidelines, the outbound transportation paid by Sika is included in category 4, whereas the outbound transportation paid by customers falls under category 9.

Roadmap: Transportation mode (including air freight) will be included in the data collection. Furthermore, cross checks with data from local entities will be performed and used to improve the assumptions on default harbours and vessel distances.

15 The entities concerned: 13 SikaDavco plants

16 The distances of proxy routes were calculated using the one tool **Online Freight Shipping & Transit Time Calculator at Searates.com.** A 15 % uplift was applied to all distances- in alignment with the GLEC framework.

Category 11
Use of sold products

Direct and indirect GHG emissions from the use of sold products were screened to assess the materiality of category 11. After an extensive screening and a deep dive into different cases, the following sources were included in the accounting of this category: direct emissions from hydrofluorocarbons (HFCs); and semivolatile organic compounds (SVOCs) and volatile organic compounds (VOCs) from solvents, silanes, and plasticizers. In alignment with the WBCSD sector guidance, VOCs and SVOCs were converted to CO_2 using stoichiometric calculations based on carbon content. For more information regarding carbon content, please refer to the section on category 12. A screening of the Environment, Health, and Safety (EHS) database for HFCs was carried out. During the screening, the following hydrofluorocarbons were identified as relevant for Sika: HCFC141b, HCFC142b, HFC152a, HFC227ea, HFC-245fa, and HFC365mfc. For each HFC, the relevant Global Warming Potential (GWP), provided by the GHG protocol, was applied.

Category 12
End-of-Life (EoL) treatment of sold products

GHG emissions associated with the EoL of sold products were calculated using the carbon content method, in alignment with the WBCSD sector guidance. The carbon content method was applied to Sika's raw materials, using the same activity data as in the category 1 calculation. To determine the carbon content of raw materials, R&D experts performed a screening of the top 80% of invoiced quanitites in each eClass. Based on this screening, an average carbon content could be determined for each material eClass[17]. This average carbon content was then applied to the total purchased kilograms of each material eClass. The final carbon content was converted to CO_2 and CH4 using stoichiometric calculations. Using factsheets from environmental databases, an end of life scenario was chosen for each material category[18].

Based on these assumptions, approximately 33% of sold products are incinerated and 67% of sold products are landfilled. In the case of incineration, 100% of carbon was converted to CO_2. For the case of landfill, it was assumed that 20% of materials decompose in a 100 year period and, according to the WBCSD sector guidance, this leads to a 10% decomposition into CO_2 and a 10% decomposition into CH_4. The carbon content method was used to calculate the end of life GHG emissions of all material groups that contain organic raw materials. EoL GHG emissions from inorganic (not containing carbon) materials were calculated with a generic emission factor for the treatment inert matter and construction waste. Purchased packaging (not included in raw materials) was grouped into five overarching categories: paper, cardboard, plastics, metal, and wood. For each category, a quantity based average emission factor of the waste treatment of the respective packaging was applied[19].

Roadmap: in the short term, the focus will be on improvements in the data quality (conversion factors, quantities, location, invoice entries) of purchasing data. Including the implementation of further controls to eliminate any duplicate entries (or similar issues) in Sika's general spend management system. In the long term Sika aims to collect secondary and primary data on EoL scenarios to enable a location and product-specific approach. This data will help verify the current assumptions made. Furthermore, the assumptions taken on decomposition rate will be reviewed and assessed as these may currently be too conservative.

17 EClass refers to the most granular segmentation in the procurement data available and is based on chemical functions.

18 Material category refers to the highest level of segmentation in the procurement data.

19 For the 2021 Scope 3 assessment, packaging EoL emissions were estimated using a carbon content method. In 2022 this methodology was compared to newest average-data waste treatment emission factors available. It was concluded that the carbon content method is too conservative and thus a switch to the average-data method was applied.

OVERVIEW AND SCREENING

DATA INPUT

Each material scope 3 category is based on specific activity data and relevant emission factors. An overview of the data used for the scope 3 assessment is provided in the table below. For all monetary emission factors used in the FY 2022 assessment, the 2021 exchange rate was used to ensure consistency to the emission calculations over subsequent years.

Category	Activity data	Emission factors
Purchased goods and services	Corporate procurement database in combination with EHS database	BaseCarbone v19.0, Sphera CUP2022.2, and Ecoinvent version 3.9.
Capital goods	CAPEX totals for all categories – Corporate Financial Reporting System	Monetary emission factors from BaseCarbone v19.0.
Fuel- and energy-related activities	Consumption data for fuels and electricity – Corporate S&O Reporting System	Defra/BEIS 2022 and IEA 2021
Upstream transportation and distribution	Corporate procurement database	GLEC Framework 2022 and EcotransIT
Waste generated in operations	Waste reporting by weight (by disposal destination and type) – Corporate S&O Reporting System	Ecoinvent 3.9, Sphera CUP2022.2 and Defra 2022
Business travel	Data collected in an adhoc form from top spend countries	Defra/BEIS 2022, Quantis
Employee commuting	FTEs from all Sika entities – Corporate Management Reporting System	Defra/BEIS 2022
Upstream leased assets	CAPEX totals for relevant leased assets categories – Corporate Financial Reporting System	Monetary emission factors from BaseCarbone v19.0.
Downstream transportation and distribution	General Sales Query	GLEC Framework 2022 and EcotransIT
Use of sold products	Corporate procurement database in combination with EHS database	GHG Protocol GWP values (AR5 – Fifth assessment report)
End-of-Life (EoL) treatment of sold products	Corporate procurement data in combination with EHS database	GHG Protocol GWP values (AR5 – Fifth assessment report), BaseCarbone v19.0, Sphera CUP 2022.2

COVERAGE

The following table provides an outline of all identified exclusions with respect to each category. The methodologies defined for each scope 3 category are limited by the activity data and emission factors available in the current year. The materiality of all exclusions has been assessed to ensure that overall results are not compromised. Exclusions are monitored yearly and significant changes are tracked and documented.

Category	Exclusions	Materiality statement for exclusions
Purchased goods and services Raw materials	1. Fuels 2. Direct spend not allocated or not assigned 3. 6 specific materials with conversion errors from BUoM to kg 4. 22 Entities not included in GSM	1. Included in scope 1. 2. Approximately 3% of procurement spend 3. 0.03 % Spend 4. GSM coverage is approximately 95.2% of procurement spend
Purchased goods and services Indirect spend	1. All expenses related to personal charges or financial charges were excluded from the scope 3 calculation 2. Furthermore, the spend categories related to travels, waste and leased assets were excluded from category 1	1. Outside of scope and boundary according to the GHG protocol 2. Included in other scope 3 categories
Purchased goods and services Trading products and Packaging	1. Toll manufacturing 2. 22 entities not included in GSM	1. 2.3% of global procurement spend 2. GSM coverage is approximately 95.2%
Capital goods	Includes all CAPEX categories aligned to the financial reporting except "Land additions"	Land additions were assessed as not relevant for GHG emissions
Fuel- and energy-related activities	All fuel and energy categories, in alignment with the scope 1 and 2 assessment.	
Upstream transportation and distribution	1. Supplier intercompany logistics 2. Air transportation 3. 6 specific materials with conversion errors from BUoM to kg 4. 22 Entities not included in GSM	1. No transparency and no data available 2. Air transportation is only used as an inbound transportation mode in exceptional circumstances 3. 0.03 % Spend 4. GSM coverage is approximately 95.2% of procurement spend
Waste generated in operations	Emissions from recycling processes, relevant for the waste classified as "waste to reuse"	Recycling processes are outside of scope and boundary according to the GHG protocol
Business travel	Only air travel and car rental included	
Employee commuting	Includes Sika employees and external temporaries	
Upstream leased assets	Categories "Leased production sites" and "Leased office and warehouses" were excluded	These categories represent longterm rent contracts where Sika's expenditure does not necessarily reflect the manufacturing on construction of leased assets

Category	Exclusions	Materiality statement for exclusions
Downstream transportation and distribution	Air and rail transportation	Transportation mode will be included in future assessments.
Use of sold products	1. Indirect use-phase emissions 2. Direct CO_2 release from chemical curing 3. Water was excluded from the solvents eClass	1. Indirect emissions amount to less than 0.5% of total scope 3 emissions 2. Full carbon content of relevant materials allocated to category 12 3. Water is not considered a VOC but reported in the Solvents eClass
End-of-Life (EoL) treatment of sold products	Please refer to the category "Purchased goods and services – raw materials" and "Purchased goods and services – trading products and packaging"	

DATA QUALITY

The GHGP[20] provides a suggested rating system to evaluate the data quality of both primary and secondary data used in the scope 3 assessment. The table below provides a highlevel overview of the limitations in data quality identified for each material scope 3 category. A continuous evaluation of these parameters will help to assess the accuracy and reliability of all relevant methodologies and results. Where possible, identified data quality limitations will be addressed and thus used to improve the overall quality of Sika's scope 3 assessment.

Category	Technology	Geography	Completeness	Reliability
Purchased goods and services	Emission factors from secondary data sources could not be found for all purchased raw materials. Proxies were applied where possible	Geographical considerations were limited by the secondary data available	Some entities are not included in the general spend management system	Average- data method applied. Data quality issues including duplicate entries from invoices in the general spend management system
Capital goods	Different technologies cannot be differentiated with monetary emission factors	Global monetary emission factors were applied hence different geographies were not considered	Land additions were not considered	The spend-based method was applied. The spend-based method is considered the least specific according to the GHGP.
Fuel- and energy-related activities	Based on energy types included in scope 1 and 2 reporting data. The calculation now includes district heating, and additional granularity regarding vehicle fuel types	Emission factors were chosen to reflect the relevant geography	In alignment with all fuel and energy categories included in the scope 1 and 2 reporting	Based on scope 1 and 2 reporting data
Upstream transportation and distribution	Currently, it is not possible to distinguish between transportation modes for upstream transportation	Assumptions were made based on aggregated regions. Emission factors were applied on regional granularity	Supplier intercompany logistics were not included in the calculation. Furthermore, some entities are not included in the general spend management system	Potential data quality issues related to limited maintenance of supplier postal code information in SAP
Waste generated in operations	Based on the S&O reporting of waste disposal by type of waste	Emission factors were chosen based on three highlevel regions. No countryspecific data was available	Based on S&O corporate reporting system	Emissions were calculated on aggregate waste quantities. Waste composition is unknown

20 Table 7.6 found on page 76 in the "Corporate value chain (Scope 3) accounting and reporting standard" of the GHGP

Category	Technology	Geography	Completeness	Reliability
Business travel	Only flights and rental cars were considered	Activity data restricted to nine countries	The calculation was based on an extrapolation of data of the eight top highspend countries	Based on reports from travel agencies and expenses reporting
Employee commuting	Currently it is not possible to distinguish between different transportation types	No geographical differences included	All Sika employees were considered	The calculation is based on generic assumptions
Upstream leased assets	Different technologies cannot be differentiated with monetary emission factors	Global monetary emission factors were applied hence different geographies were not considered	Leased assets which are paid with yearly rents (e.g. building rentals) were not included. It was assumed that rents do not reflect the upstream emissions	The spend-based method was applied. The spend-based method is considered the least specific according to the GHGP
Downstream transportation and distribution	Currently, it is not possible to distinguish between transportation modes	Assumptions were made on country and regional level. Emission factors were applied on regional granularity	Intercompany and intraplant transportation was included where postal codes were maintained	Potential data quality issues related to limited maintenance of customer postal code information in SAP
Use of sold products	Where applicable, information about specific technologies was included in the screening	Geographical differences are unknown and were thus not considered	Indirect emissions were screened, assessed as immaterial and thus excluded. Continuous investigation in alignment with innovation is needed to assess the materiality	Assumptions on relevant VOCs was taken on eClass level. No material specific VOC data collected
End-of-Life (EoL) treatment of sold products	Currently, no information/ data is available regarding the endoflife scenarios of Sika products. Assumptions were made	No geographical diffe rences were considered	Some entities are not included in the general spend management system	Assumptions were made regarding the carbon content for each material eClass[21]. Average-data for Packaging

21 Eclass refers to a grouping of raw materials applied by corporate procurement.

EXCLUDED SCOPE 3 CATEGORIES

All the GHGP scope 3 categories were assessed for their relevance. Categories 10, 13, 14 and 15 were identified as insignificant or irrelevant for Sika and thus excluded from the assessment. Detailed exclusion criteria for each category are provided in the table below.

Categories	Exclusion criteria
Processing of sold products	– Final products: emissions from application of Sika sold products fall under indirect Cat. 11 Use of sold products – Intermediate products: from WBCSD Chemical Sector Standard recommendation, which applies to intermediate products only, "chemical companies are not required to report Scope 3, category 10 emissions, since reliable figures are difficult to obtain, due to the diverse application and customer structure"
Downstream leased assets (assets owned by Sika and leased to others)	There is only one known case of downstream leased assets: dispensers (tank to store admixtures) in the USA leased to strategic partners of larger contracts. A screening estimated the CO_2 emissions at 600 tons CO_2eq. It was determined that emissions from the downstream leased assets are not significant
Franchises	In 2022, Sika did not operate any franchises and as such, this category was deemed to be irrelevant. Franchises are not part of Sika's business model
Investments	Sika's investment categories: – Subsidiaries: all subsidiaries with +50% equity investments are consolidated in the financial reporting and included in the scope 1, 2 and 3 assessments for FY 2022 – Shares: Sika has some minority shares (20%–50%) in three small companies: HPS North America, LLC, Chemical Sangyo, Seven Tech – Financial assets (> 0%–20%): if Sika holds shares with an ownership interest of 20% or less, those will be reported as financial assets. In 2021, such investments amounted to CHF 85.2 million. The major part (CHF 64.3 mn) came from the USA and it is related to funds for an employee benefit plan which is not restricted to equity investment

Cover image
Quay Quarter Tower is one of kind in terms of redevelopment of an existing building instead of complete demolition and rebuild. The idea was to preserve the structure and add on where possible which would reduce waste, pollution, CO_2, natural resources etc.

Sika supplied fire rated joint sealants, floor leveling, waterproofing, concrete repair mortars, structural grouts, and concrete admixtures.

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