Polisan HOLDİNG

2024

Carbon Footprint Summary Report



About the Report

The greenhouse gas inventory studies carried out by Polisan Holding and its group companies (Polisan Kimya, Polisan Yapıkim, and Poliport Kimya) have been calculated in line with the principles of conformity, completeness, consistency, transparency, and accuracy of the internationally recognized Greenhouse Gas Protocol (GHG) and the ISO 14064-1:2018 standard, and verified by an accredited body in accordance with the ISO 14064-3 standard.

The verified corporate carbon footprint value of the group companies for the year 2024 activities:

Emission Subcategories (IPCC-AR6)

198.746	ton CO_2
0,15	ton CH_4
0,28	ton NH_3
0,019	ton HFCs

198.826

ton CO_2e

There are no PFCs and SF6* emissions within the specified categories.
Environmentally friendly air-insulated circuit breakers are used in our facilities.

Emission Values by Company (ton CO_2e)

	Polisan Holding	Polisan Kimya	Polisan Yapıkim	Poliport Kimya	Total
Scope 1	229	6,298	285	3,024	**9,836**
Scope 2	86	746	28	330	**1,190**
Total (Scope 1 & 2)	315	7,044	313	3,354	**11,026**
Scope 3	526	110,457	71,436	**5,382**	**187,801**
Total (Scope 1, 2 & 3)	841	117,500	71,749	8,736	**198,826**

Emission Intensity by Year (kg CO_2e / ton production-handling)

	2023	2024
Polisan Kimya	56.19	53.20
Polisan Yapıkim	2.43	2.59
Poliport Kimya	1.05	1.06

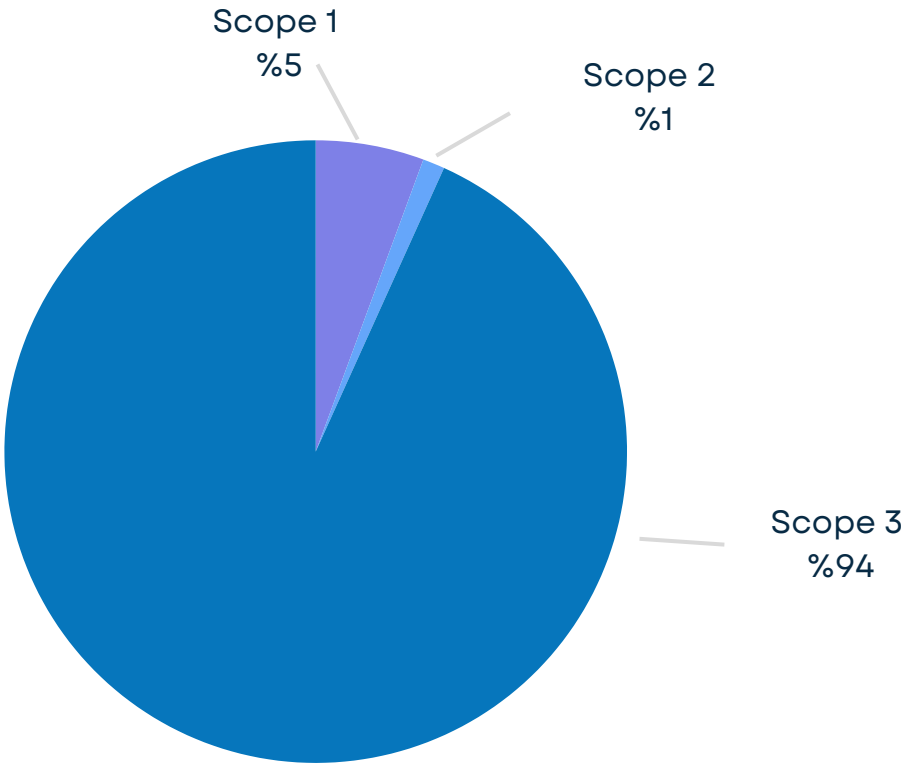
*Scope 1 and 2 emissions included.

Emission Company Distributions (tons CO_2e)

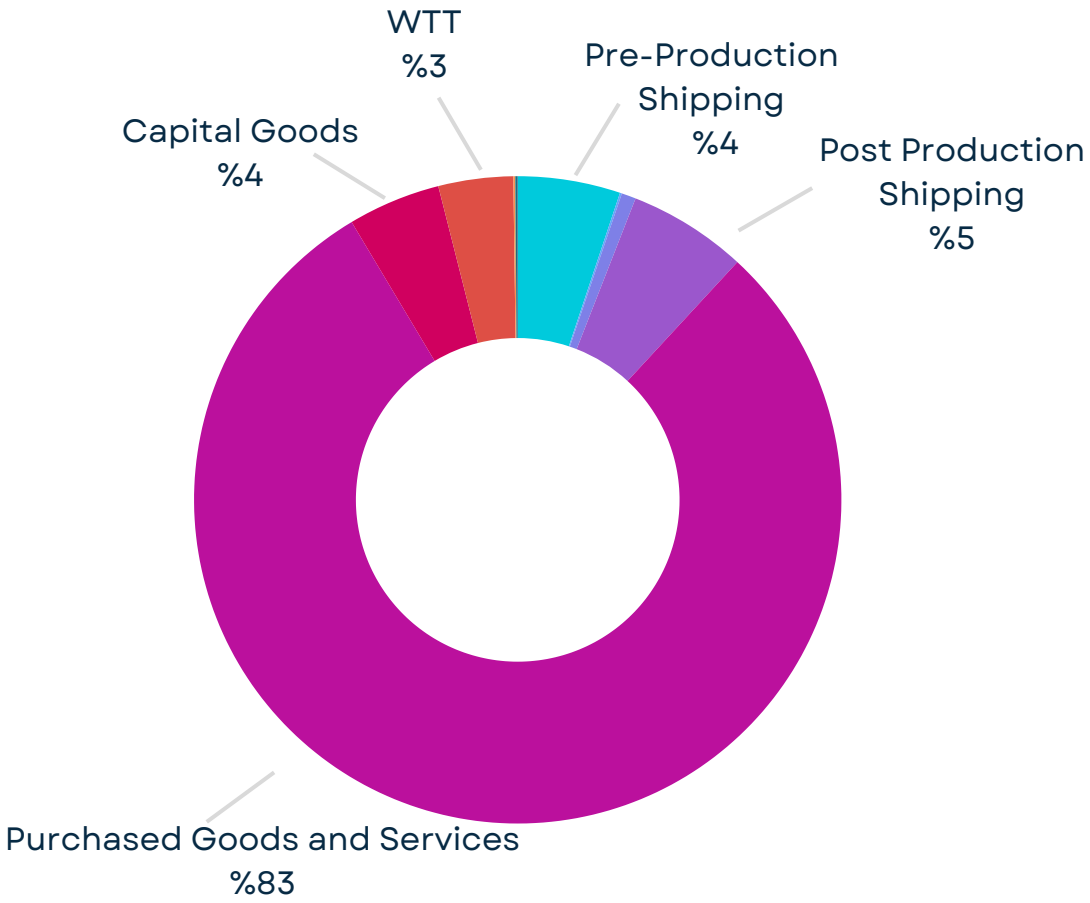
ISO 14064-1	GHG Protocol	Polisan Holding	Polisan Kimya	Polisan Yapıkim	Poliport Kimya	Total tCO_2e
Category 1	Scope 1	229	6,298	285	3,024	**9,836**
Category 2	Scope 2 (Market-Based)	86	746	28	330	**1,190**
	Scope 2 (Location-Based)	344	5,622	248	2,553	**8,766**
Category 3	Scope 3.4: Pre-Production Transportation and Distribution	-	4,042	2,963	-	**7,005**
	Scope 3.6: Business Travel	63	94	93	77	**327**
	Scope 3.7: Employee Transportation	256	342	77	437	**1,113**
	Scope 3.9: Post-Production Transportation and Distribution	-	5,202	3,959	-	**9,161**
Category 4	Scope 3.1: Purchased Goods and Services	41	93,954	62,531	168	**156,693**
	Scope 3.2: Capital Goods (Fixed Assets)	14	3,700	264	3,821	**7,799**
	Scope 3.3: Fuel and Energy Related Activities (Except Scope 1 and 2)	151	3,099	1,524	863	**5,637**
	Scope 3.5: Production Waste	1	22	3	16	**41**
	Waste Transportation (ISO 14064-1)*	1	25	5	29	**60**
Category 5	Scope 3.12: Disposal of Sold Products	-	2	22	-	**24**
Category 6	Indirect Greenhouse Gas Emissions from Other Sources	-	-	-	-	**-**
	Total**	**841**	**117,500**	**71,749**	**8,736**	**198,826**

* Emissions from the transportation of waste to disposal facilities (difference between GHG Protocol and ISO 14064)
** In total emissions calculations, the market-based emission value is taken as the basis for Category 2.

Emission Distribution by Scopes



Distribution of Scope 3 Emission Sources



Calculation System Limits

ISO 14064-1	GHG Protokol	Activity	Explanation
Category 1	Scope 1	Stationary Combustion - Natural Gas	Natural gas is used for processes and heating within the group companies. Emissions from natural gas consumption have been calculated under this category.
		Stationary Combustion - LPG	LPG cylinders are used as a combustion supporter within the group companies. Emissions from LPG consumption have been calculated under this category.
		Stationary Combustion - Process-Related Combustion	Diesel fuel is used for process purposes within the group companies (boiler room, generator, fire pump, etc.). Emissions from diesel consumption have been calculated under this category.
		Mobile Combustion - On-Site Machinery	Diesel fuel is consumed by loading and transport vehicles (forklifts, loaders, trucks, etc.) used within the sites of the group companies. Emissions from diesel consumption have been calculated under this category.
		Mobile Combustion - Company Vehicles	Gasoline and diesel company vehicles are used in group companies. Emissions resulting from fuel consumption are calculated under this heading.
		Cooling Gas	R22, R32, R410A, R600A, and R717 gases are used in cooling equipment such as air conditioners, water dispensers, and refrigerators within the group companies. Emission calculations have been conducted based on annual theoretical leakage rates and filling quantities.
		Fire Extinguisher	Emissions from the use and maintenance activities of CO_2-containing fire extinguishers within the group companies have been calculated under this category.
		Process Emission	CO_2 emissions released during the production of formaldehyde from methanol at Polisan Kimya are calculated and audited in accordance with the National Greenhouse Gas Monitoring and Management Regulation.

Calculation System Limits

ISO 14064-1	GHG Protokol	Activity	Explanation
Category 2	Scope 2	Grid Electricity (Market-Based)	The consumption of IREC-certified renewable electricity from wind energy purchased by the group companies has been calculated under this category using the market-based calculation method.
		Grid Electricity (Location-Based)	Emissions from electricity consumption within the group companies have been calculated under this category using the location-based calculation method.
		Indirect Energy Consumption (Natural Gas)	Emissions from natural gas supplied by the headquarters' building management for office heating are calculated under this heading.
Category 3	Scope 3.4	Pre-Production Transportation and Distribution	Emissions from transportation activities occurring during the raw material procurement process at Polisan Kimya and Polisan Yapıkimya have been calculated under this category.
	Scope 3.5	Production Waste and Waste Transportation*	Emissions related to the transportation of waste generated during production and handling processes in the group companies to the waste facility have been calculated under this heading. * *Differences between the GHG Protocol and ISO 14064 methodologies have been taken into account.*
	Scope 3.6	Business Travel	Emissions from air travel, hotel accommodations, domestic travel (such as taxis), and the transportation of visitors to the facility within the group companies have been accounted for under this category.
	Scope 3.7	Employee Transportation	Emissions from shuttle vehicles used to transport employees to office locations within the group companies have been calculated under this category.
	Scope 3.9	Post-Production Transportation and Distribution	Emissions generated during the transportation and distribution of products to customers at Kimya and Yapıkimya, as well as postal transportation within the group companies, have been calculated under this category.

Calculation System Limits

ISO 14064-1	GHG Protokol	Activity	Explanation
Category 4	Scope 3.1	Purchased Goods and Services	Emissions from raw material procurement at Polisan Kimya and Polisan Yapıkimya, indirect purchases within the group companies (A4 paper, drinking water, tap water), catering (food), cleaning and security services, as well as diesel, gasoline, and LPG consumption by subcontractors/contractors, have been calculated under this category.
	Scope 3.2	Capital Goods (Fixed Assets)	Emissions resulting from the use of machinery, buildings, ongoing investments, and IT/electronic purchases within the group companies have been calculated under this category.
	Scope 3.3	Fuel and Energy Related Activities (Except Scope 1 and 2)	Emissions from all fuel-consuming activities within the group companies, covering the entire process from well to pump, have been calculated under this category.
	Scope 3.5	Waste Management	Emissions from the disposal of domestic and industrial waste, as well as wastewater management processes within the group companies, have been calculated under this category.
	Scope 3.8	Pre-production Leased Assets	Since emissions from rented vehicles are included in Scope 1 emissions, they have not been separately calculated under this category.
Category 5	Scope 3.10	Processing of Sold Products	Polisan Kimya and Polisan Yapıkimya products do not create emissions because they lose their chemical structure and turn into another product at the customer site. Therefore, it is not evaluated under this heading.
	Scope 3.11	Use of Sold Products	Since the products sold are sold directly ready for use and do not create emissions during use, they are not evaluated under this heading.

Calculation System Limits

ISO 14064-1	GHG Protokol	Activity	Explanation
Category 5	Scope 3.12	Disposal of Sold Products	The sold products are of a commercial nature and do not generate emissions as they lose their chemical structure and transform into another product during processing at the customer site. However, emissions from the disposal of their packaging have been included in the calculation.
	Scope 3.13	Post-Production Leased Assets	Since no leasing activities take place after production, this category has not been assessed.
	Scope 3.14	Franchising	Since there is no franchising business model, it has not been considered in the assessment. Shipments to Polisan Kimya dealers have been evaluated under Scope 3.9 (Transportation and Distribution).
	Scope 3.15	Investments	This category, as defined in the Greenhouse Gas Protocol, is not relevant to the group companies and has therefore been excluded from the scope and not included in the calculations.
Category 6	Other	Indirect Greenhouse Gas Emissions from Other Sources	Indirect greenhouse gas emissions that cannot be classified under other categories have been accounted for under this category.

Methodological Uncertainty Values

The uncertainty matrix has been used in the calculation of the uncertainty level, and the evaluation criteria are presented in the table below. The uncertainty values for the data acquisition method and the emission factor acquisition method have been compared, with the highest value being taken as the basis.

Data Acquisition Method	Emission Factor Acquisition Method	Uncertainty Value (%)
Measurement Devices Subject to Legal Metrological Control	IPCC, DEFRA, EPA	1,5
Calibration Period Valid Measuring Devices	Internationally Accepted Data (Ecoinvent etc.)	1,5
Devices with Expired or No Calibration Period	National Inventories of Countries (NIR etc.)	2,5
Manufacturer Data with Emission Values (Gas Capacity, etc.)	Emission Data Provided by the Manufacturer (MSDS etc.)	3,5
Data Based on Supplier Declaration or Government Notification	Data Received Directly from Supplier	5
Distance Calculation Software (Google Maps etc.)	Estimation-Based Calculations	7

The total uncertainty value for Scope 1 and Scope 2 emissions of the group companies has been calculated as 4.0%, and the data accuracy has been classified as "High."

The cumulative uncertainty value for Scope 1, 2, and 3 is 5.3%, and the calculations have been conducted within a reasonable confidence level.

Emission Reduction Targets

Progress of emission reduction targets related to climate change under the 2021–2025 Sustainability Strategies, by year:

Target	Progress Status	
2012 → 2025	**2023**	**2024**
Scope 1 and Scope 2 emission intensity reduction of 45%	**%55**	**%60**
2019 → 2025	**2023**	**2024**
Scope 1 and Scope 2 emission intensity reduction of 25%	**%9**	**%13**
Scope 2 absolute emissions reduction of 100%	**%70**	**%80**
2021 → 2025	**2023**	**2024**
Scope 1, 2 and 3 emission intensity reduction of 10%	**%31**	**%16**

2053: Net Zero

Climate Change–Related Risks and Opportunities

The risks arising from climate change and the accompanying opportunities are addressed within the framework of the Türkiye Sustainability Reporting Standards (TSRS). Physical and transition risks, as well as opportunities that may arise at different stages of the value chain, are regularly reviewed, and potential financial impacts are evaluated.

Short-, medium-, and long-term climate risks are managed in line with the objectives of the Paris Agreement and in compliance with national and international regulations.

Details on scenario analyses regarding climate-related risks and opportunities, their impacts on the value chain, and their financial implications are presented in the TSRS-aligned sustainability report.