



# Greenhouse Gas (GHG) Inventory Report 2024 Scope 1 & 2

## **Esterchem Ltd**

Basford Lane Industrial Estate  
Leekbrook  
Leek  
ST13 7QF

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Company Registration Number: 3546522

VAT Registration Number: GB704766429

**Excellence in Esters**

<b>Company description</b>
Esterchem Ltd was founded in 1998 with the mission to offer customers high quality esters. Our state-of-the-art production facility utilises the latest technology to produce a wide range of Esters. The design of our plant allows us to offer a high degree of flexibility and service to our customers.
<b>List of scope 1 and scope 2 activities excluded from the report (with justification)</b>
N/A - All Scope 1 and 2 emissions are included.
<b>Reporting period covered by this inventory</b>
From 01/01/2024 to 31/12/2024

## CONSOLIDATION APPROACH

<b>Chosen consolidation approach</b>
Operational Control

## OPERATIONAL BOUNDARIES

<b>Are Scope 3 emissions included in this inventory?</b>
No

## INFORMATION ON EMISSIONS

The table below refers to emissions independent of any GHG trades which are not applicable to Esterchem Ltd.

EMISSIONS	TOTAL (tCO <sub>2</sub> e)	CO <sub>2</sub> (tCO <sub>2</sub> )	CH <sub>4</sub> (tCO <sub>2</sub> e)	N <sub>2</sub> O (tCO <sub>2</sub> e)	HFCs (tCO <sub>2</sub> e)	PFCs (tCO <sub>2</sub> e)	SF <sub>6</sub> (tCO <sub>2</sub> e)	NF <sub>3</sub> (tCO <sub>2</sub> e)
Scope 1	3517.33	3506.86	5.33	2.1	3.04	0	0	0
Scope 2 <sup>a</sup>	848.29	839.6	3.69	5	0	0	0	0
Scope 2 <sup>b</sup>	0	0	0	0	0	0	0	0
<b>Direct CO<sub>2</sub> emissions from Biogenic combustion (tCO<sub>2</sub>)</b>								
N/A								
<b>Indirect CO<sub>2</sub> emissions from biogenic combustion (tCO<sub>2</sub>)</b>								
The UK Government conversion factors do not note the percentage of biomass in the emission factor and do not separately report the biogenic CO <sub>2</sub> , effectively treating it as “zero” emissions.								

## BASE YEAR

<b>Year chosen as base year</b>								
2021 – This is the base year for our validated SBTi emissions reduction commitment.								
<b>Clarification of company-determined policy for making base year emissions recalculations</b>								
Changes will be made at the end of each financial year. The company will restate updated base year emissions and reported previous years when it reports its latest greenhouse emissions.								
<b>Context for any significant emissions changes that trigger base year emissions recalculations</b>								
If structural, methodological or boundary changes result in Scope 1 and 2, or 3 emissions changing by 5% or more, then the base year inventory will be re-calculated and restated.								
<b>Base year emissions</b>								
EMISSIONS	TOTAL (tCO <sub>2</sub> e)	CO <sub>2</sub> (tCO <sub>2</sub> )	CH <sub>4</sub> (tCO <sub>2</sub> e)	N <sub>2</sub> O (tCO <sub>2</sub> e)	HFCs (tCO <sub>2</sub> e)	PFCs (tCO <sub>2</sub> e)	SF <sub>6</sub> (tCO <sub>2</sub> e)	NF <sub>3</sub> (tCO <sub>2</sub> e)
Scope 1	4698.66	4688.37	6.38	2.92	0.99	0	0	0
Scope 2 <sup>a</sup>	903.04	893.81	3.4	5.83	0	0	0	0
Scope 2 <sup>b</sup>	0	0	0	0	0	0	0	0

<sup>a</sup> Location-based approach

<sup>b</sup> Market-based approach

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## METHODOLOGIES AND EMISSION FACTORS

### Methodologies used to calculate or measure emissions, and emissions factors used (provide sources for others used than those provided by the GHG Protocol).

#### Methodology:

- 1) Although not directly applicable to Esterchem Ltd, The UK Government's 'Environmental reporting guidelines' stipulates that Scope 2 electricity emissions should be primarily reported using location-based grid average emissions factors, however as we have entered into contractual arrangements for renewable electricity a 'dual reporting' approach for Scope 2 figure where market-based emissions can be reported alongside location-based emissions will be used. For the period above electricity was supplied by Drax for which emissions were backed by Renewable Energy Guarantees of Origin (REGO) – these will be available 08/25.
- 2) For the purposes of reporting, natural gas has been converted using 'Gross CV' values as UK energy is for the most part billed on this basis (rather than 'Net CV').
- 3) As there is currently no way of separating out the amount of diesel used by the FLT's (MCE) and backup generator (SCE), all emissions from diesel used on site by these assets has been reported under the FLT's (MCE) as the amount of diesel used by the backup generator will have been negligible.
- 4) All company vehicles for which there was business mileage in 2024 were plug-in hybrid vehicles. There is no data available in relation to how much of the business mileage is driven by fuel compared to business mileage driven by electricity - only the total mileage is known. As a result, in line with UK Government GHG Conversion Factors advice, "Method 2: Generic vehicle emission factors" has been used. Each PHEV car has been classified by segment and the factors for PHEV applied as these emission factors account for the average share of driving using electricity and conventional fuel.
- 5) There are various A/C units on site, details of these were identified through various senior managers, and information was sought from Sovereign who are responsible for the ongoing maintenance of these units and in relation to any equipment installed or disposed of in the relevant time periods and any refrigerant tops ups. The leakage rate and the emissions from HFCs were then calculated and translated into CO<sub>2</sub>e emissions using the Global Warming Potential. These figures also include the decommissioning of obsolete equipment and the installation of new equipment.
- 6) Emissions from transmission and distribution (T&D) losses and well-to-tank (WTT) generation of the electricity purchased and used are accounted for in Scope 3 calculations.
- 7) Well-to-tank (WTT) emissions for business travel in company vehicles are accounted for in Scope 3 calculations.
- 8) Well-to-tank (WTT) emissions for diesel and natural gas purchased and used are accounted for in Scope 3 calculations.

#### Conversion factors used:

- 1) UK Government GHG Conversion Factors for Company Reporting 2024 (Version 1.1)
- 2) GWP value of R32 - <https://www.gov.uk/guidance/fluorinated-gases-f-gases>

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**ORGANIZATIONAL BOUNDARIES**

List of all legal entities or facilities over which reporting company has equity share, financial control or operational control	Does reporting company have operational control? (yes/no)
Main Office (owned): Esterchem Ltd, Unit 1 Basford Lane, Leek, ST13 7DT	Yes
Production Site (owned): Esterchem Ltd, Brooklands Way, Leek, ST13 7QF	Yes

**INFORMATION ON EMISSIONS**

Emissions disaggregated by source types								
Scope 1: Direct Emissions from owned/controlled operations								
EMISSIONS	TOTAL (tCO <sub>2</sub> e)	CO <sub>2</sub> (tCO <sub>2</sub> )	CH <sub>4</sub> (tCO <sub>2</sub> e)	N <sub>2</sub> O (tCO <sub>2</sub> e)	HFCs (tCO <sub>2</sub> e)	PFCs (tCO <sub>2</sub> e)	SF <sub>6</sub> (tCO <sub>2</sub> e)	NF <sub>3</sub> (tCO <sub>2</sub> e)
Stationary Combustion	3483.87	3476.83	5.33	1.71	0	0	0	0
Mobile Combustion	30.42	30.03	0	0.39	0	0	0	0
Fugitive Sources	3.04	0	0	0	3.04	0	0	0
Process Sources	0	0	0	0	0	0	0	0
Scope 2 <sup>a</sup> : Indirect Emissions from the use of purchased electricity, steam, heating & cooling								
EMISSIONS	TOTAL (tCO <sub>2</sub> e)	CO <sub>2</sub> (tCO <sub>2</sub> )	CH <sub>4</sub> (tCO <sub>2</sub> e)	N <sub>2</sub> O (tCO <sub>2</sub> e)	HFCs (tCO <sub>2</sub> e)	PFCs (tCO <sub>2</sub> e)	SF <sub>6</sub> (tCO <sub>2</sub> e)	NF <sub>3</sub> (tCO <sub>2</sub> e)
Purchased Electricity	848.29	839.6	3.69	5	0	0	0	0
Purchased Steam	N/A	-	-	-	-	-	-	-
Purchased Cooling	N/A	-	-	-	-	-	-	-
Purchased Heating	N/A	-	-	-	-	-	-	-

<sup>a</sup> Location-based approach

Has this inventory been verified by an accredited third party?
No

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