

# Product Emissions Report

## Alsiflex™ 210 fabric

### Reference year: 2022

#### Introduction

This study is carried out on behalf of ALSICO, based in Renaix Belgium.

As a European leader in the workwear and PPE market, the Alsico Group benefits from a strong industrial dynamic and global expertise in workwear and PPE.

The history of the Alsico group is above all the adventure of a family for 80 years who tries to surround themselves with the best partners to work together daily, this quest for excellence.

Innovation is at the heart of Alsico's business, in this context, a new fabric, Alsiflex™, is being developed to meet the environmental issues that concern us.



This study will be based on the methodology of a single-criterion life cycle analysis, namely, the overall impact of greenhouse gases for the manufacturing of Alsiflex™ fabric.

There are several greenhouse gases (GHGs) that are harmful. Rather than measuring the emissions of each gas, we use a common unit: the CO2 equivalent.

This report conforms to the requirements for public disclosure of the life cycle GHG emissions of products laid out in the 'Code of Good Practice for product GHG emissions and reductions. It aims to provide the basis to allow consistent information for product GHG emissions and reduction.

#### Report 2022

1. Background information	
1.1	<b>Name of company:</b> ALSICO Zonnestraat 223-229, 9600 Ronse - BELGIUM - EUROPE <a href="#">alsico group</a>
1.2	<b>Specifications and/or other documents against which the company has been assessed for conformity:</b> <ul style="list-style-type: none"><li>i. Bilan Carbone® v8</li><li>ii. Code of Good Practice for Product Greenhouse Gas Emissions and Reduction Claims – Carbon Trust</li></ul>

	<p>iii. The guide to PAS 2050:2011 “How to carbon footprint your products, identify hotspots and reduce emissions in your supply chain” – ISBN 978-0-580-77432-4</p> <p>iv. The guide to PAS 2050 “How to assess the carbon footprint of goods and services” – ISBN 978-0-580-64636-2</p>
<b>1.3</b>	<p><b>Name of the independent, third party verifier:</b></p> <p>CO2 Strategy  PI de l’Armistice,13 5170 Bois de Villers Belgium  <a href="http://www.co2strategy.be">http://www.co2strategy.be</a></p> 
<b>1.4</b>	<p><b>Date of Verification:</b></p> <p><b>October 2022</b></p> <p><b>Realized by :</b></p>  <p>Frédéric Mathot</p> <p>Licensee of the Bilan Carbone® method since 2012</p>
<b>2. Company policy in relation to climate change</b>	
<b>2.1</b>	<p><b>Alsico position:</b></p> <p>In the face of the climate issues that concern us, no one can now remain passive. For this reason, it is now essential to think of the "CO2" criterion, and therefore, of greenhouse gas emissions, when making a technical choice or making an important decision. In this spirit, ALSICO commissioned CO2 Strategy to measure the CO2 impact of their new ALSIFLEX™210 fabric.</p> <p>We also want to offset non-reducible emissions and offer our customers CO2-neutral garment.</p>

### 3. Product emissions declarations: Supporting information

<b>3.1</b>	<b>Product (s) assessed in accordance with the Bilan Carbone method and PAS 2050 on which claims are made:</b>  <b>one square meter (m<sup>2</sup>) of Alsiflex™ 210 fabric (weight of one square meter: 210 gr)</b>	
<b>3.2</b>	<b>Product emissions: Full life cycle GHG emissions for the product</b> <i>(the most recent quantitative result of the assessment reported in the form of a single figure, and considering all the phases of the product life cycle, in accordance with the specification of PAS 2050, and of scope 3 of the Bilan Carbone method,<sup>1, 2</sup>)</i>	1180 g CO <sub>2</sub> e per square meter +/_ 29% <sup>3</sup>
	<b>Raw materials:</b>	460
	<b>Manufacturing:</b>	659
	<b>Distribution:</b>	61
	<b>Consumer use:</b>	n/a <sup>4</sup>
	<b>Disposal:</b>	n/a <sup>5</sup>
<b>3.3</b>	<b>Optional: GHG emissions for individual phases of a product's life cycle</b>	n/a
<b>3.4</b>	<b>Optional: GHG emissions results based on different scenarios of life cycle management</b>	n/a
<b>3.5</b>	<b>Date of assessment for results specified in 3.2 - 3.4 (above)</b>	October 2022

### 4. Product emissions reduction: Supporting information

#### **Description of drivers of reduction claims**

<b>4.1</b>	<p><b>Description of the high-level actions that have been implemented, or which are planned to be implemented, to reduce the life cycle GHG emissions of the product:</b></p> <p>Our study showed that Alsiflex™ fabric is on average 66% less CO<sub>2</sub>-emitting than another type of fabric. This difference is largely due to the choice of raw materials. The raw materials used are of recycled or organic origin. This choice of raw materials has a much lower impact on greenhouse gas emissions than conventional raw materials.</p> <p>We think it is important to remember that the choice of raw materials also addresses other very important issues for our planet, namely:</p>
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<sup>1</sup> Figures for GHG emissions shall be specified as mass of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) as defined by the Bilan Carbone method

<sup>2</sup> The product-related life cycle GHG emissions for the product shall be specified per functional unit of the product. (One square meter)

<sup>3</sup> Uncertainty essentially comes from the uncertainty of the emission factors which allow the conversion of a flow into CO<sub>2</sub> emissions. This uncertainty is defined by the databases used.

<sup>4</sup> The study area ends at the door of the clothing manufacturer. We consider in this perimeter that the Alsiflex fabric does not consume energy during its use.

<sup>5</sup> The system boundary for an assessment identified as cradle-to-gate shall include the emissions and removals identified in 5.1 of PAS 2050 that have occurred up to and including the point where the product arrives at the door of the garment manufacturer. End of life is therefore not included in this scope. For products that use recycled content as an input, the emissions and removals associated with the processing of that material shall be included (see annex D of PAS 2050)

	<ol style="list-style-type: none"> <li>1. Recycled: a pillar of a circular economy, recycled is essential for a future whose scarce resources will be less available. The recycled raw material comes from the recycling of plastic bottles. It also affects plastic pollution in the oceans.</li> <li>2. Renewable or alternative to fossil: One of the raw materials is derived from plant matter and therefore sustainable over time, this represents an important alternative to a plastic production mainly derived from virgin materials of fossil origin.</li> </ol> <p>During our study, we also estimated the CO2 emissions of a garment that would be made with the product studied.</p> <p>This estimate will be based on the Bilan Carbone® study of Alsico's activity carried out in 2017 and updated in 2021.</p> <p>For our analysis, we will therefore make two assumptions:</p> <ol style="list-style-type: none"> <li>1. The manufacture of an Alsiflex™ 210 garment does not influence the production method, and therefore, CO2 emissions other than raw materials remain the same.</li> <li>2. The Alsiflex™ 210 garment will have the same quantities or proportions of accessories as the reference clothing</li> </ol> <p>Conclusions from the study of the CO2 impact of a typical garment composed of Alsiflex™ fabric: Compared to the emissions of Alsico's typical clothing, Alsiflex™ clothing would be almost 2.6 times less emitting!</p>	
<b>4.2</b>	<b>Explanation of banked results: N/A</b>	
<b>4.3</b>	<b>Explanation of baseline updates: N/A</b>	
<b>4.4</b>	<b>Explanation of impact of force majeure: N/A</b>	
<b>5. Boundaries and data: Supporting information</b>		
<b>5.1 Product reference Number(s)</b>	<b>5.2 Emissions assessment boundaries and the basis for the boundary decisions</b> <i>(Bilan Carbone® or PAS specifications)</i>	<b>5.3 Sources of secondary data which have been used for the assessment</b>
<b>Product reference:</b>	The Bilan Carbone method and the PAS 2050 rules are used to specify the limits. The specific limits and categorizations are described below.	<b>General:</b> <b>Standard emissions factors</b> <ul style="list-style-type: none"> <li>- Bilan Carbone V8</li> <li>- Base Carbone - ADEME</li> <li>- Ecoinvent data v2.0</li> <li>- Eco-profiles of the European Plastics Industry</li> <li>- GHG Protocol</li> </ul> <b>and general inputs:</b> <ul style="list-style-type: none"> <li>- Alsico - Belgium</li> <li>- Chinese fabric manufacturer</li> </ul>

	<b>1 Raw material:</b> includes fabric composition, auxiliaries and transport to fabric factory	<b>Raw materials</b> <ul style="list-style-type: none"> <li>- life cycle analysis of raw material manufacturers Base Carbone - ADEME</li> <li>- Ecoinvent data v2.0</li> <li>- Bilan Carbone V8</li> <li>- Base Carbone - ADEME</li> <li>- Ecoinvent data v2.0</li> <li>- Eco-profiles of the European Plastics Industry</li> </ul>
	<b>2 Production: The manufacture of the fabric</b> includes all phases of production: spinning, weaving, and dyeing.	<b>Production</b> <ul style="list-style-type: none"> <li>- Chinese fabric manufacturer</li> <li>- Bilan Carbone V8</li> </ul>
	<b>3 Distribution</b> including direct transport from the factory in China to Alsico in Belgium	<b>Distribution</b> <ul style="list-style-type: none"> <li>- Alsico</li> <li>- Bilan Carbone V8</li> </ul>

## 6. Disclaimer about uncertainty of results

The emissions figures provided in this report have been calculated in accordance with the requirements of the PAS 2050 method and the Bilan Carbone method, using the primary and secondary data sources specified above. Based on the assessment methodology, we believe that our assessment identified 95% of the probable GHG emissions associated with the full product life cycle covered in this report. However, readers should be aware that even the primary data sources are estimates and are subject to change over time, and the figures given in this report should be considered our best estimate, based on a cost of reasonable assessment.