



*GSC Group's sustainability journey began in the early 2000s, driven by innovation, technology, and expertise, continuously expanding in plants, products, and certifications.*

*CREDIT: GSC GROUP*

## GSC Group outlines latest sustainability initiatives

*GSC Group, a long-established manufacturer in the leather chemicals sector, has outlined its latest sustainability initiatives in its 2023 Sustainability Report. With nearly 50 years of experience, the company seeks to integrate technological advancement with environmental responsibility, focusing on circular economy principles, energy efficiency, and innovation in leather processing chemicals.*

The latest report from the Italian chemical manufacturer highlights key areas of progress, including investment in renewable energy, bio-based chemistry, emissions reductions, and sustainable research. While these efforts demonstrate an ongoing commitment to environmental and social responsibility, The GSC Group acknowledges the complexities and challenges involved in making the leather industry more sustainable. One of its stated priorities is to increase reliance on self-generated renewable energy. In 2023, the company generated 15% of its total energy needs through photovoltaic systems, which, it claims, prevented 132.5 tonnes of CO<sub>2</sub> equivalent emissions. However, it acknowledges that further efforts are needed to reduce its dependence on external energy sources and fossil fuels.

R&D Manager, Francesco Serafini, explains, "To increase the percentage of self-generated renewable energy, it is essential to expand the available photovoltaic surfaces. Therefore, we have invested in a new 12,000-square-metre facility in Montebello Vicentino, where around 4,000 square metres of solar panels will be installed. This will allow us to double our energy self-production and improve operational sustainability."

These developments align with broader industry trends, where manufacturers are under increasing pressure to shift towards renewable energy sources. However, it remains to be seen whether these measures will be sufficient to meet long-term decarbonisation targets, given the energy-intensive nature of leather chemical production.



### Advancing bio-based chemistry

The development of bio-based chemicals is a key focus as it seeks to reduce reliance on fossil-derived raw materials. However, one of the main challenges in transitioning to more sustainable alternatives is maintaining the same level of performance as traditional petrochemical-based products.

To address this, the company states that it has adopted a rigorous research and development process. More than 10% of its annual budget is allocated to R&D, with additional investments planned for new laboratory facilities and equipment. It also claims that its quality control system is designed to ensure that bio-based formulations meet performance expectations, with over 60,000 chemical and application tests carried out annually.

"We continuously invest in R&D to formulate bio-based products using high-quality raw materials, testing them to ensure both effectiveness and stability. On average, our laboratories verify 20,000 products per year, conducting up to 100,000 quality control analyses. This level of testing is critical to maintaining high performance standards while transitioning to more sustainable chemistry," says Mr Serafini.

Customer collaboration is also a factor in product development, with approximately 53,000 leather tests conducted and 6,500 leather samples verified on request annually. This approach is intended to allow continuous optimisation of formulations based on real-world applications. However, the wider adoption of bio-based chemicals across the industry remains a gradual process. While these efforts indicate a commitment to sustainability, challenges such as raw material availability, cost, and regulatory compliance continue to shape the pace of change.

### Addressing Scope 3

Scope 3 emissions — those generated across the supply chain — represent one of the biggest challenges for companies seeking to reduce their overall environmental impact. According to Mr Serafini, indirect emissions account for the majority of its carbon footprint, particularly those associated with raw material procurement. "The reduction of Scope 3 emissions represents a strategic goal for our business, achieved through close collaboration with suppliers across the entire production chain. We prioritise suppliers that provide bio-based and renewable raw materials, reducing dependence on petrochemical derivatives and lowering overall CO<sub>2</sub> emissions as much as possible."

To support these efforts, the company adheres to the Zero Discharge of Hazardous Chemicals (ZDHC) programme, with 417 registered products meeting ZDHC compliance standards. In 2023, it claims to have achieved a 4.2% reduction in the sales of Manufacturing Restricted Substances List (MRSL) chemicals, which it attributes to investments of approximately €100,000 in safer alternatives.

Transportation-related emissions are another area of focus. The company claims that it has taken steps to reduce its logistical carbon footprint by favouring local and regional suppliers where possible. Additionally, it was the first Italian business in the leather chemicals sector to participate in Carbon Footprint Italy, a national programme

aimed at monitoring and reducing greenhouse gas emissions. While these measures indicate progress, the effectiveness of supplier engagement strategies in significantly reducing Scope 3 emissions remains a challenge across the industry. The extent to which such initiatives contribute to overall emission reductions will likely depend on the broader availability of sustainable raw materials and supply chain efficiencies.

### Innovation and collaboration

A key investment in its long-term sustainability strategy is the construction of a new leather application laboratory in Zermeghedo. Scheduled for completion in September this year, the 6,500-square-metre facility is expected to be one of the largest of its kind in Europe.

The laboratory will focus on the development of new formulations for wet-end and finishing processes, with plans to introduce an integrated digital system for tracking formulations, which it claims will improve efficiency and record-keeping in the development process. A dedicated area will also be allocated to customer support, offering physical leather testing and colour analysis services.

Although research into new sustainable raw materials will remain within the Montebello Vicentino headquarters, the new facility aims to contribute to the development of more environmentally friendly technical formulations with improved Life Cycle Assessment (LCA) results.

The Zermeghedo laboratory will be featured in an upcoming issue of *World Leather*, where further details of its research focus and expected impact will be explored.

### Looking ahead

The group's latest sustainability report provides an insight into its ongoing efforts to integrate environmental and social responsibility into its operations. It claims to have made significant progress in key areas such as renewable energy expansion, bio-based product development, and supply chain emissions reduction. However, the extent to which these initiatives contribute to broader industry decarbonisation goals will depend on their long-term impact and scalability.

The completion of the Zermeghedo laboratory will represent a substantial investment in research and collaboration, signalling the intent to remain at the forefront of sustainable leather chemistry. The company seeks to use this facility as a platform for industry engagement, supporting both product development and wider sectoral innovation.

Nevertheless, challenges remain. The transition towards sustainability in the leather chemicals industry is a complex process, influenced by factors such as regulatory developments, raw material availability, and economic pressures. While the group's initiatives align with global sustainability objectives, ongoing assessment will be required to determine the effectiveness of these measures in achieving meaningful environmental improvements.

As the industry continues to evolve, the ability of the company to adapt and expand its sustainability strategies will likely play a key role in its future positioning. The coming years will provide a clearer picture of how these investments translate into measurable progress towards a lower-impact leather chemicals sector. 🌱