

Innovation in focus: meeting customer needs, creating competitive advantage



“Everything we do in innovation is designed to meet our customers’ needs and drive our strategy. Increasingly, that means offering more sustainable products with value-added performance.”

Robin Harrison
Vice President, Innovation

Innovation is key to building our portfolio of specialised, highly differentiated products, which is at the heart of Synthomer’s growth strategy.

The rapid increase in demand from customers for products with sustainable benefits gives us an opportunity to use our innovation skills to create competitive advantage. Everything we do in innovation – new product design, process improvements, new application development – is designed to bring us closer to our customers’ needs, offering more sustainable products and value-added performance – which in turn helps drive Synthomer’s growth.

This approach is enabling us to proactively build our innovation product pipeline towards our Vision 2030 sustainable products goal of having 60% of new products with sustainability benefits. This year, we launched nine new products with enhanced sustainability benefits, meaning we reached 64% (up from 50% in 2022). This is our third consecutive rise since we launched our Vision 2030 roadmap.

» Sustainability in focus on pages 28-35.

Highlights from 2023

- Launched new 3D printing resin formulation of support moulds
- Product sustainability scorecard featured by Gartner
- Adhesive Solutions recognised as leader in sustainability through innovation by Henkel
- Majority of key speciality manufacturing sites ISCC PLUS certified

External recognition for our sustainability scorecard

Much of our progress is thanks to the success of our product sustainability scorecard, introduced in 2021. We use the scorecard to prioritise innovation projects against specific criteria, such as the use of raw materials, ability to reduce energy consumption, and helping customers meet their sustainability goals. It provides a clear framework to discuss product development and has transformed the way we design with sustainability in mind. The scorecard has become a real differentiator for us, and for the second year running received external recognition, this time from Gartner who shared it as an example of how sustainability can drive innovation.

We intend to keep refining this tool, and in early 2024 we launched an updated version to create more balance between the way we assess the benefits to our own operations and those that we can offer our customers and end users.

Meeting customers’ needs on raw materials and performance

We know that more and more customers are looking for products that reduce carbon emissions, improve product safety and create a more circular economy. And we can make a significant impact on all these areas through the raw materials that we choose to make our products.

For example, we are developing a new chloroprene-free contact adhesive as a direct result of customer requests. And we have committed to eliminating an emulsifier used in fibre bonding binders called alkylphenol

ethoxylates (APEO) by the end of 2024. This is a big undertaking that involves reformulating 17 products, but customers have responded to the change faster than we anticipated and we are seeing growth in this business.

In the AS division, we are working with a growing number of customers across the tyre manufacturing and hygiene industries to explore options to develop products with greater bio-based content and better recycling qualities.

And in CCS, we have successfully produced our first pilot-scale batches based on our new bio-based emulsion polymer platform for coatings. This has demonstrated differentiated performance, and we expect initial customer sampling to take place in the first half of 2024.

We also want to help customers better understand the full impact of using our products. Having developed our own in-house lifecycle assessment (LCA) and product carbon footprint (PCF) capabilities last year, we are now able to provide our customers with PCF reports in accordance with TFS guidelines, covering more than 60% of our production volume. The methodology developed by our in-house LCA team is focused on the application/chemical family combination, which makes it possible to assess the carbon footprint for each market segment. At the same time, this approach enables a more accurate calculation of Synthomer's own carbon footprint.

Another good year for our innovation pipeline

Despite continuing to face significant market challenges across our business, we remain focused on our aim to ensure that new and protected products make up at least 20% of our sales volume – the NPP metric – over the long term. This year we exceeded 22%, demonstrating that we have a productive, resilient new product pipeline.

We see further opportunities to participate in rapidly evolving markets such as 3D printing, and at the end of 2023 we launched a new toxin-free, biodegradable product that can be used in certain 3D printing moulds, which can be dissolved away in cold water once an object is printed. We also see significant growth opportunities in new geographies. This year, for example, we launched our NBR binder for technical fibres, gaskets and embracers into the USA.

All of this is testament to the hard work of our innovation teams, who have embraced a more collaborative approach following our reorganisation in 2022. For example, we have created greater synergies between the four teams from four separate laboratories who now work together at our innovation centre in Akron, USA. We have also developed a new Innovation Excellence framework, which includes examples of good practice for documenting ideas, aligning our innovation portfolio to our strategy and managing innovation projects. This has increased our focus on skills development, on implementing advanced experimental design and modelling, and on artificial intelligence methods.

Meanwhile, colleagues from the AS division are also helping us think about innovation differently. For example, we are looking at ways to incorporate plastic modifiers, typically used in adhesives, to create more recyclable flexible packaging materials.

Looking ahead

While we are pleased that we have exceeded our sustainable products target this year, we must keep that momentum going. We will continue our work in this area over the next year, as well as maintaining our NPP score above 20%, with particular focus on speciality products. We will also look to offer customers new products made with ISCC PLUS-certified bio-feedstocks.

Our innovation centres keep us close to our customers

We have a network of 12 innovation sites around the world. These include our four centres of innovation excellence, which provide product and process innovation across all our divisions, and eight technical centres and pilot lines located close to our manufacturing sites or the markets they serve.

Our centres of excellence

Akron, USA
Harlow, UK
Marl, Germany
Asia Innovation Centre, Kulai, Malaysia

Our market-specific technical centres

USA, Chester, Jefferson, Longview
Italy, St Albano
China, Shanghai
Portugal, Sintra
UK, Accrington
The Netherlands, Middelburg

