Supplier shake-up

Major players respond to developments in dynamic global market for rubber fillers, chemicals and additives

Photo: Continental

The drive to reduce CO_2 emissions allied with growing demand in key markets is driving expansions and restructuring moves among producers of carbon black and other rubber additives.

Reflecting current capex trends, Tokai Carbon is planning to invest Yen57 billion (€353 million) in its carbon black business over the three years to end of 2026, as part of a strategy to strengthen the core business.

Under its T-2026 mid-term management plant, Tokai aims to further develop its carbon black into a "higher value-added business with expanded production capacity."

Breaking down its investment plans, Tokai said it aimed to spend a total of Yen146-billion on its operations group-wide – Yen57-billion of which is earmarked for the carbon black business.

Targets include a Yen4-billion investment in 'promoting carbon-neutrality', another Yen4-billion in "addressing environmental issues mainly at North America plants" and a Yen49-billion investment in Thailand.

Last September, subsidiary Thai Tokai Carbon Product Co. announced plans to build a new carbon black production facility in Rayong, southern Thailand.

The company planned to start construction on the THB9.9 billion (€270 million) plant by July 2023 and complete the project by April 2025.

Once completed, Tokai will relocate operations from its existing 180 kilotonne-per-annum (ktpa) Thai plant in Sriracha, to the facility which will be located at the LK Rubber industrial city hub.

Spanning an area of over 200,000 square metres, the new manufacturing plant will also have the capacity to produce 180ktpa of rubber blacks.

Tokai has been operational in Thailand since 1989 and manufactures carbon black for tire and rubber product applications.

Tokai Carbon launches major investment programme

In its latest statement, the supplier said demand for its carbon black products had increased "significantly" in the region in recent years due to expansion of the automotive industry.

Tokai currently has a long-term lease agreement for its existing plant site in Thailand but has decided to establish a "more sustainable" supply platform by relocating to new land owned by the company.

Elsewhere, Birla Carbon has announced that it is expanding its carbon black production capacity with the construction of two greenfield manufacturing sites in Asia.

The facilities will be based in Niadupet, Andhra Pradesh, India, and Rayong, Thailand, the supplier announced 22 Jan.

The units will each have an initial capacity to produce 120ktpa of carbon black and are set to be operational in 2025.

Mumbai, India-based Birla added that it plans to double the output of each plant to 240ktpa "in the future".

However, the carbon black manufacturer did not provide the financial details of the projects or the grades of carbon black to be produced at the sites.

"These two new greenfield sites

Recent project announcements by major suppliers

Company	Investment	Locations	Project	Targets
Birla	n/a	Niadupet, India, and Rayong, Thailand	Two new carbon black plants	Each with initial capacity to 120ktpa of carbon black by 2025
Cabot Corp.	n/a	Tianjin, China	Carbon black unit closure	Restructuring at site acquired from Tokai Carbon
Epsilon	€1bn	Jharsuguda, India	New carbon products facility	Includes 300ktpa carbon black capacity
Evonik	n/a	Charleston, US	Precipitated silica expansion	Increase production capacity by 50%.
Lanxess	n/a	Jhagadia, India	Release agents expansion	"Significantly" increase capacity
SI Group	n/a	Jinshan, China	Additives plant closure	Restructuring move and supply deal in China
Tokai Carbon	€353m	Japan, Thailand	Expand carbon black capacity	Higher value-added business

will be prioritised based on their locations, demand dynamics in the region, and specific customer needs," stated Birla.

Birla's previously announced brownfield expansion plans in Hungary, as well as a speciality expansion in Patalganga, India, "are progressing on plan," the company added.

The two new facilities are intended to support "key customers in the fast-growing markets of India and southeast Asia," said John Loudermilk, president and CEO, Birla Carbon.

Birla added that it will focus on the completion of its expansion initiatives while it continues to evaluate additional capacity requirements in various geographies.

In January, another Indian producer Epsilon Carbon Pvt. Ltd unveiled a project to build a major carbon products facility in Jharsuguda, in the eastern Indian province of Odisha.

Mumbai, India-based Epsilon signed an MoU with the government of Odisha for the INR100 billion (€1 billion) facility, to be built under a 10-year plan.

Production will focus on carbon products and will have an overall capacity of 875ktpa, said the company's announcement.

The integrated plant, it added, will include a 500ktpa unit for speciality carbons, 300ktpa for carbon black and 75ktpa for advanced material.

Epsilon to build new carbon products facilities in India

With the new facility, Epsilon said it is on track to become "the largest coal tar distiller in India and third largest carbon black manufacturer" in the country.

The project is expected to generate 2,000 jobs and support skills-development and infrastructure-development in the local region, Epsilon added.

In the US, meanwhile, Evonik Industries AG is increasing production capacity for precipitated silica at its site in Charleston, South Carolina by 50%.

The German group is investing a "mid-double-digit million-euro amount" in the project, the construction work on which is set to start mid-year.

The new production line is expected to start operation in early 2026, Evonik announced in a 1 Feb press statement.

The expanded capacity will meet "high demand" for the materials, particularly from the tire industry in North America, it stated.

"North America is an important strategic growth region for us," said Maike Schuh, chief financial officer of Evonik and responsible for the Americas region.

With the expansion, the Charleston site will become "a major hub for precipitated and sustainable silica products in North

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America," according to Lauren Kjeldsen, head of the smart materials division.

The project falls within Evonik's "roadmap towards carbon neutrality" for its Charleston site.

"The commercial and technical teams have worked intensely in the past years to develop a robust expansion concept, which we will now implement," said Emmanuel Auer, head of the silica business line.

While addressing the 'local-to-local' demand, the expansion aims to introduce "circular raw materials" to manufacture Ultrasil-branded silica to meet the sustainability targets of the tire industry.

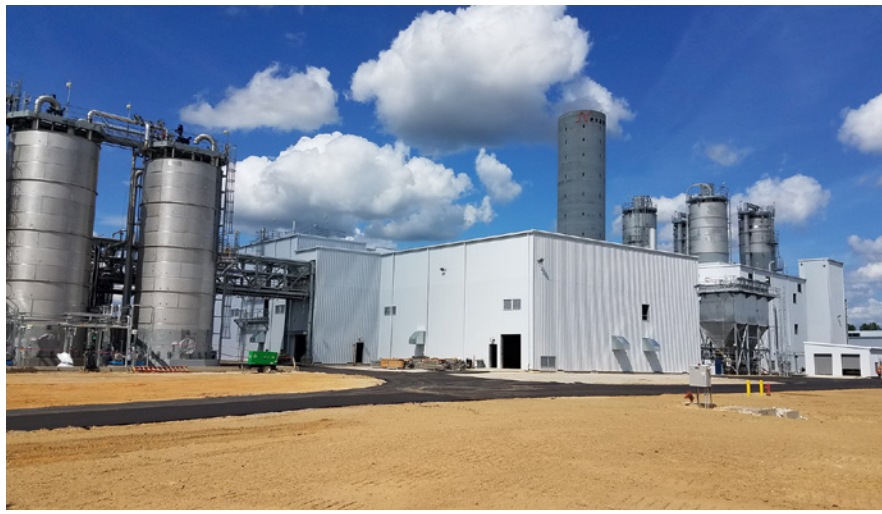
According to Evonik, using silica as a tire additive can reduce a conventional passenger car's fuel consumption by up to 8%.

In North America, it added, demand for tires with reduced rolling resistance and improved fuel efficiency is "experiencing above-average growth."

"Over the past years, Evonik has continuously invested in modern silica production updates and strategic acquisitions around the globe," said the German supplier.

Evonik's Charleston facilities are part of a network of 18 precipitated silica production sites globally.

Growing demand for release agents is the target for Lanxess AG, which has recently completed and put into operation a project to expand production of these products at its site in Jhagadia, India.



Expansion project at Evonik's production site in the US

The new production line will "significantly increase" the production capacity for the Rhenodiv-branded additives within Lanxess business unit Rhein Chemie.

The expansion, added Lanxess' 27 Feb statement, will enable the company to "meet growing demand of the Indian subcontinent and the Asian tire and rubber goods markets."

The line features "state-of-the-art equipment and technology... which enables the production of high-quality tire release agents more efficiently," said Lanxess, which operates a similar facility in Argentina.

According to Lanxess, Rhenodiv release agents are "strictly water-based, solvent-free and free of volatile organic compounds (VOCs) and therefore, environmentally friendly."

"India is an important region for us, and this strategic milestone reflects our commitment towards meeting the growing demands," said CEO and chairman of the management board Matthias Zachert.

The new facility, continued the Lanxess leader, increases production capacity while showcasing "our faith in the immense potential of the Indian market."

Restructuring moves

Cabot Corp. has posted restructuring charges of over $8 million (€7.3 million) for the planned closure of its reinforcing carbons unit in Tianjin, China, the company has announced.

In an 8 Feb SEC filing of first quarter results, Cabot said the move was part of a wider restructuring activity initiated during the final three months of 2023.

The restructuring, said Cabot, covered both its carbon black operations 'reinforcement materials segment' and its performance chemicals segment.

Under the 'reinforcement materials' plan, Cabot said it will close the Tianjin reinforcing carbons unit, acquired from Tokai Carbon in February 2022.

With the move, the company expects to consolidate reinforcing carbons operations and reduce ongoing operational costs.

During the three months ended 31 Dec 2023, Cabot recorded charges of $2 million for severance-related costs and $6 million for 'accelerated depreciation' as part of the restructuring plan.

Cabot expects to record additional restructuring charges of $1

Photo: Copyright Lanxess

Lanxess expands release agents capacity in India

million related to the measures during the remainder of its fiscal year, ended 30 Sept 2024.

On acquiring the Chinese facility from Tokai Carbon, Cabot announced plans to upgrade the operation to support its battery materials product line.

Located near Cabot's existing carbon black and speciality compounds facility in Tianjin, the site had the capacity to produce up to 50ktpa of carbon black when acquired.

In a statement about the unit closure, a Cabot spokeswoman said that since acquiring the Tianjin plant, "we have been upgrading the capabilities of the facility to support the growth of our battery materials product line."

Cabot, she added, will "ensure security-of-supply for our reinforcing carbons customers in China and elsewhere by leveraging... our other [facilities] in Tianjin, Shanghai and Xingtai, to name a few."

US-based performance additives supplier SI Group has, meanwhile, entered a long-term supply partnership with Liaoning Dingjide Petrochemical as part of a restructuring of its production in China.

Through the partnership, Dingjide will manufacture certain SI Group products in China as a co-producer, said SI Group in an announcement 21 Feb.

As a result of the supply agreement, SI Group will cease manufacturing operations at its Jinshan, China manufacturing facility and will list the property and associated legal entity for sale.

Under terms of the agreement, The Woodlands, Texas-based SI Group will continue to offer the products to customers in China and will distribute and sell the materials outside of China.

Cabot changes in China

The company release did not specify which products will be manufactured by Dingjide but said antioxidants will be included in the portfolio.

With the agreement, SI Group said it would seek to relocate its R&D facilities in Jinshan and will continue to operate its remaining offices and manufacturing facility in China.

The partnership will help the group optimise its footprint and 'variablise' cost structure, explained Joey Gullion, SVP chief commercial officer at SI Group.

The move is part of the group's vision of becoming a "global performance additives powerhouse" and the partnership is "a significant step in that journey," the group added.

The partnership, said CEO and president David Bradley, will realise "quality growth in Asia Pacific and globally."

"Our agreement with Dingjide reinforces our position as a main antioxidant supplier of choice for our customers," Bradley added.

SI Group's Jinshan manufacturing facility is expected to cease manufacturing operations on 31 July.

Levidian unveils graphene tire

UK climate-tech company Levidian has unveiled a prototype truck tire which combines its "net zero graphene" with carbon black in a new tread formulation.

The graphene-enhanced natural rubber and butadiene rubber tire tread compound delivers significantly enhanced mechanical and dynamic properties, Levidian said 20 March

Independent testing by the Tun Abdul Razak Research Centre has shown that addition of the graphene can reduce tire rolling-resistance by around 23%, the company stated.

Initial test results, it noted, have also indicated potential for reduced compound density, which would allow for the development of lighter-weight tires.

"Overall, this could deliver substantial improvements in fuel efficiency of 3-4%," said Levidian, which launched the product during Tire Technology Expo in Hanover, 19-21 March.

According to Cambridge-based Levidian, its LOOP 'plasma cracking' process strips carbon from methane to produce both hydrogen fuel and graphene.

The 'device', it said, can be integrated into any existing industrial site that produces methane or uses natural gas.

The technology can reduce the CO_2 potential of natural gas by up to 40% by replacing it with hydrogen, claims Levidian.

Tire makers, it said, could thereby cut emissions from their manufacturing operations and produce reinforcing graphene filler on site for use in tread compounds.