

June, 2020

The Chemical Reaction



Introduction

Welcome to The Chemical Reaction, where our team of experts keeps you up to date with all things Chemicals. Find highlights on current events, key trends and much more in the content below. Interested in learning more on a certain subject? Navigate to a report through the links included or reach out to one of our qualified analysts for more information.

Our recent Insights and Informs:

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Q2 2020



INEOS and BP strike a deal

Hugh Hartzog and Joyce Grigorey, 30 June 2020

While most of the oil majors and NOCs are focusing on strengthening their petrochemical integration, BP announced on 29 June 2020 that it was divesting its standalone petrochemical assets to INEOS in a deal worth US\$5 billion.

What is driving BP?

Earlier this month, BP announced it was cutting 14% of its global workforce, writing off US\$17.5 billion on asset values and trimming capital expenditure by 25%. The company needed to raise cash urgently and aimed to do this by divesting its position in its chemical businesses. This deal helps achieve BP's target of selling US\$15 billion worth of assets by 2021, one year earlier than planned. At the same time, it allows the company to focus on its long-term strategic goal – energy transition.

This is not the first time BP divested assets to INEOS – in 2005 it sold Innovene for US\$9 billion. BP held onto its paraxylene/PTA and acetyls assets when they were making strong profits. But now these businesses are struggling with over-capacity and the company has opted to forego the capital investments needed to keep pace in these highly competitive commodity markets.

Aside from the remaining deeply-integrated Gelsenkirchen and Mulheim sites, BP has now exited the chemicals business.



What is in it for INEOS?

The deal includes a number of co-located assets and represents a good overall portfolio fit with very limited overlap. Undoubtedly, INEOS is relying upon capturing significant operational synergies as it integrates the two businesses.

INEOS already has an existing EO/EG business, but the purchase of BP's 15 chemical assets enhances its integration into the polyester value chain. Furthermore, the company may perceive strong growth potential in the plastics circularity movement and the acquisition of BP's recycling business, Infinia, gains INEOS instant access to this space. Included in the sale is BP's recycling technology that reconverts plastic polyethylene terephthalate (PET) waste back into virgin-quality feedstocks.

Not only does this acquisition allow INEOS to focus on sustainability, it increases its footprint into the Asian market for the first time, previous attempts at which had been unsuccessful. The move catapults INEOS into the quickly growing PET and polyester fibers markets.

Invista officially starts construction of a key polyamide-6,6 intermediate plant in China

Timur Zilbershteyn, 29 June 2020

Issue

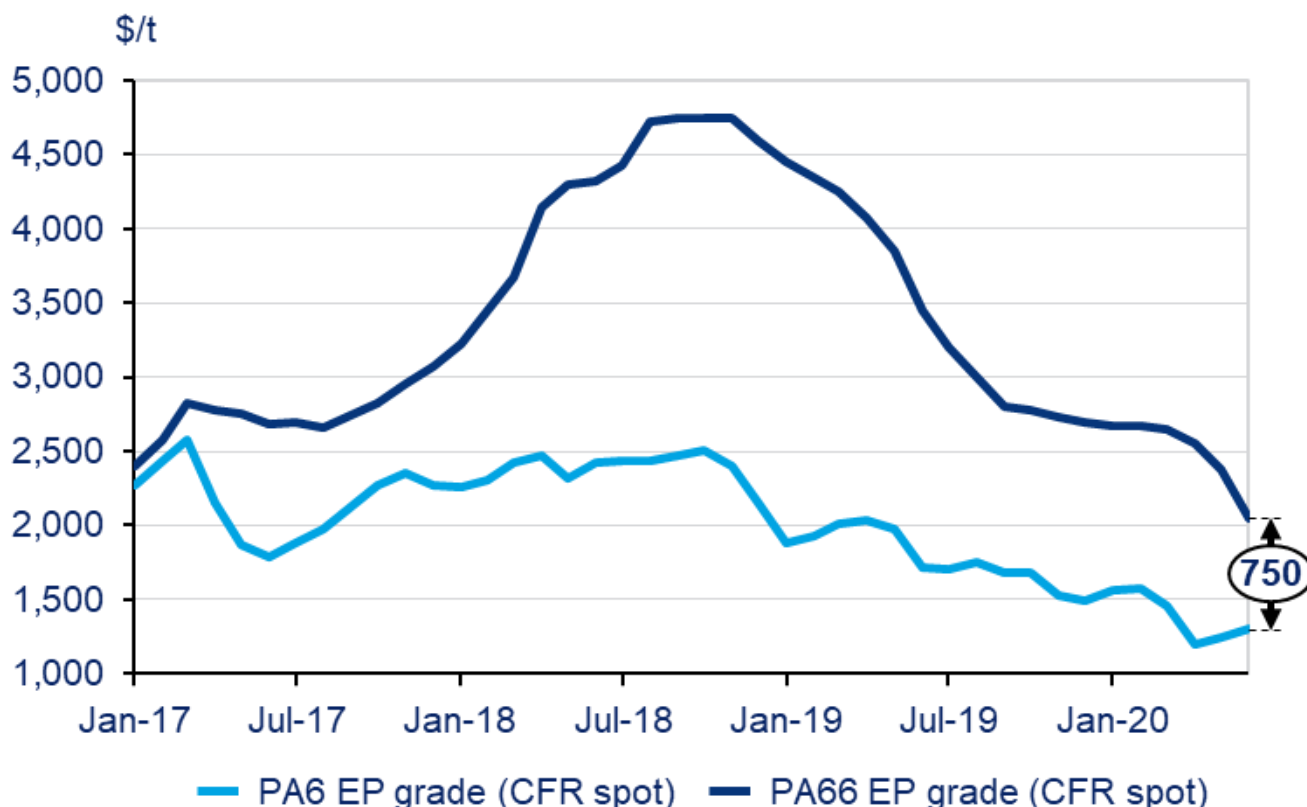
- On 16 June, Invista held a groundbreaking ceremony for its world-scale adiponitrile (ADN) facility in Shanghai, China. This 400 ktpa plant is expected to start in 2022 and cost about US\$ 1 billion. The plant will be fully integrated to the existing hexamethylenediamine (HMD) and polyamide-6,6 (PA66) plants on the same site to complete the PA66 value chain in China.
- ADN is a key intermediate to the PA66 polymer production, which supply was previously limited to just a handful of world-scale plants in the US and France. The new plant will increase the current total global ADN capacity by 22%.

Implications

- For years, PA66 polymer prices have enjoyed significant premium over polyamide-6 (PA6) polymer prices. At the same time, PA66 application has been more concentrated on the core performance-demanding application, in which could not be replaced by PA6 or other cheaper polymers.
- Following a series of force majeure events in 2018 that sharply increased PA66 prices, a number of producers along the PA66 value chain announced plans to build new capacity, including ADN. As the result, wider availability of PA66 polymer is expected by 2020, leading to a prolonged decline in PA66 prices.
- PA66 polymer demand is highly dependent on the automotive industry. Depending on the region, 40-50% of PA66 polymers are consumed in the plastics and industrial fibres required for manufacturing modern vehicles.
- The coronavirus crisis strongly hit the automotive demand, with 20-25% decrease is expected in the global automotive sales compared to last year. This pressured down Asia PA66 prices to go below US\$2,000/t this month.



PA66 vs. PA6 Price Spread in Asia



Source: Wood Mackenzie Chemicals

Outlook

- Increasing PA66 polymer supply and limited growth opportunities in the traditional applications will likely result in further price declines and a relatively small premium over PA6 polymer prices.
- PA6 and PA66 polymer properties and production costs are quite similar, allowing PA66 polymer to compete in the areas where PA6 was predominantly used, such as engineering plastics of moderate performance.
- In the next few years, we may even see a return of affordable PA66 polymers in the Asian nylon textile market, where it currently plays a niche role. There is also an upside potential for PA66 to substitute PA6 in the multi-million tons textile markets.

Coronavirus and polymers - hanging by a thread

Bruna Angel, Guy Bailey, Andrew Brown, 26 June 2020

In our [newest coronavirus and polymers](#), we review the impact of the outbreak on the apparel sector and the polymer value chains exposed to it. Retail sales have fallen considerably in recent months, driven by the combination of brick and mortar stores shut-down through lockdowns and less discretionary consumer spending as a result of an uncertain economic outlook. So what's it mean for polymers?

Key points from this week's update include:

- How the poor performance of the apparel sector is reflected in weak indicators globally



- What suppressed sales mean for polymer value chains
- The response of the industry as it relates to the prioritization of sustainability initiatives

Confidence remains for long-term growth of China's nylon textile filament market

Emma Liu, 19 June 2020

Issue

- China's apparel sector has been hit hard by the coronavirus outbreak this year, impacting sales on the domestic and export markets. However, there are still several new nylon textile filament (NTF) facilities in China that started production in Q2 2020. Producers are feeling confident for the long-term growth although the current market is facing headwinds from the pandemic.
- Shenma Group Nylon Filament Technology started up a 40 ktpa NTF production unit in April. This marks Shenma's entry into the textile filament industry after focusing on the industrial textile segment for years. Fujian Kaibang also started up a 23 ktpa NTF unit in April, and another 23 ktpa NTF unit is planned to start in June. Even Fujian Liuyuan, a downstream knitting producer, has started a backward integration to the filament production, with its new 20 ktpa NTF unit, which came online in May.

Implications

- According to [Wood Mackenzie Fibres Global Supply Demand Report 2019](#), China's NTF production capacity has been at a surplus compared to demand, with an average operating rate of 65% in 2019.
- Oversupply is expected to continue in the coming years with new investments - over 80 ktpa of new production capacity this year will undoubtedly bring fiercer supply competition.
- Producers are making various efforts to survive. Medium and large-sized companies, such as Fujian Kaibang, continue to expand plant capacities to achieve economies of scale. Some leading producers even did backward integration to caprolactam production to reduce costs. Smaller plants, while not necessarily being cost-competitive, can take advantage of their flexibility to respond quickly to market changes.

Outlook

- China is the largest NTF-producing country in the world, accounting for ~75% of global NTF production in 2019. Although some apparel plants have moved out of China, whether in response to the economics or because of more interest in diversifying supply, they still rely on China for fibres supply.
- Looking ahead, more NTF capacities will be built to support the downstream demand growth. NTF is widely used in hosiery and lingerie, and there is a rising use in athletic wear because nylon products are lightweight and have good moisture absorbance. Besides growth from these traditional applications, emerging markets incrementally grows net demand. For example, the feather yarn market emerged in 2017 and the rising demand for ear loop face mask production starting this April help the NTF industry to survive.



Indonesia's Pertamina and Taiwan's CPC sign Head of Agreement (HOA) for a joint US\$8 billion petrochemical project in Balongan, West Java

Catherine Tan, 18 June 2020

Issue

- The HOA signing on 5 June follows an MoU signed in October 2018, signalling both parties' commitment to the project
- Pertamina and CPC will hold a 45% stake each, with the remaining stakes to be made available to other partners
- The project will include a naphtha cracker with an ethylene capacity of 1 million tons per annum. Details of derivatives are not yet available at this early stage. Commercial operation is currently planned for 2026.

Implications

- The project offers CPC the opportunity to expand its geographical footprint, as well as allow Pertamina a chance to work with an experienced operator in the base petrochemicals space
- With Pertamina's position in the refining sector, investment into petrochemicals is a natural extension as it can offer integration benefits
- In January, Pertamina also signed an agreement with ADNOC around a potential joint development of a crude-to-petrochemicals complex in Balongan, which would appear to be a competing project at the same site. It remains to be seen if ADNOC will continue to push for the Balongan project or take up Pertamina's offer to take over the stakes in the Cilacap refinery project following Saudi Aramco's recent withdrawal
- In parallel, Pertamina is partnering Rosneft on a refinery and petrochemical complex project in Tuban, East Java. The project is currently in the engineering design phase and land acquisition is still ongoing. FID is expected in 2021.
- Indonesia's existing cracker is owned by private company Chandra Asri, so the successful implementation of Pertamina's planned cracker project(s) will mark the state-owned company's first foray into the ethylene chain. Pertamina has existing propylene production from its refining operations

Outlook

- Indonesia's large and growing population base is expected to drive strong demand growth for polymers. As its deficit for ethylene and propylene derivatives is expected to grow, a cracker and derivatives project offers the partners a chance to capture a share of this growing market, which would otherwise be met with increasing imports
- Apart from Pertamina, steam cracker projects in Indonesia are also being pursued by other private companies like Lotte Chemical and Chandra Asri (CAP2), with the former at a more advanced stage. We continue to monitor the progress of the various projects and provide regular updates to our clients via our monthly ethylene/propylene capacity updates.

Coronavirus and polymers – has the virus demolished construction?

Andrew Brown, 12 June 2020

In this week's Coronavirus and Polymers, we present an in-depth review of the impact of the virus outbreak on the building and construction sector, where the impact has been highly variable. Though some lockdown measures spared development from completely shutting down, how has the sector responded to a degraded economic outlook, and what does it mean for polymers?

Key points from this week's update include:



- How "essential" have building and construction projects been labelled
- Macro indicators suggest a sizeable slowdown
- Which polymer markets have weakened in response to the sector's softening

Please click [here](#) to access the full insight.

Full extent of coronavirus pandemic highlights the robustness in the flexible packaging supply chain

Robert Gilfillan, 10 June 2020

Issue

- As the world starts to come to terms with both the disastrous human and economic costs of the coronavirus pandemic, the [flexible packaging](#) sector finds itself as one of few industries to see an uplift in business.
- The widespread social lockdown measures implemented by almost all governments have seen huge volumes of food consumption switch from restaurants and cafés to home. The speed at which these lockdown measures were imposed acted as a double whammy for the retail packaging supply chain.

Implication

- The spike in demand for flexible packaging led consumers in near unison across the world to 'panic buy' food and household items for fear of a shortage. This fed through the supply chain as packers looked to order packaging material in bulk, no matter the substrate and its recyclability credentials, putting the issue of plastic sustainability on the backburner for the immediate future. While it is interesting to note the inherent value consumers have placed on sterile, safe plastic packaging during the crisis, it would be misplaced to think the longer term issue of sustainability will not come back to the forefront as we return to the 'new normal'.
- Social distancing and lockdown measures have meant companies through the value chain, from film producers, ink and solvent manufacturers to raw material producers, have had major operational hurdles to overcome to simply keep the lights on. Sourcing raw materials and distributing product has also been a major challenge with transportation hubs all but closed down.

Outlook

- It is a testament to the robustness of the flexible packaging supply chain that the industry has not suffered any major downtime and has broadly continued to supply customers in a reasonable timeframe. It is also worth noting that companies have so far resisted the temptation to 'cash-in' on the situation and to raise prices in the face of extremely high demand. Strategic relationships have been put ahead of short-term profit, with companies have been wisely valuing long-term growth.
- Given how quickly the global transport network came to a grinding halt, one of the key non-health issues the crisis has highlighted is the risk of being overly reliant on a single source for product, with China being the obvious example.
- Regardless of how robust the packaging supply chain is, this unprecedented situation will undoubtedly see companies evaluate their respective network of raw material suppliers, thus we may see an accelerated move to diversify supplier bases and a continued move towards local production for local demand.



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The petrochemicals industry landscape is shifting at an alarming pace. Only one thing seems certain: the coming decade will be shaped by the coronavirus crisis. Consumer behaviour, investment decisions, the corporate landscape and even the path of globalisation will be influenced by its effects.

It's never been more important to have a wide view of the path ahead – while keeping a sharp focus on your key markets.

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- Assess market trends and plan for the future with detailed forecasts and analysis
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- Pinpoint investment opportunities and threats
- Understand sustainability and recycling, and how they affect conventional business strategies

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