

November, 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.

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Q4 2020



India terminates MEG ADD investigation: Impact and implications

Jason Anderson Raj, 23 November 2020

India's monoethylene glycol (MEG) demand growth is the second largest in the world after China. On 20 November 2020, the ADD investigation on MEG into India was terminated. The original countries being investigated were Kuwait, Oman, UAE, Saudi Arabia and Singapore, but Saudi Arabia was later removed from the list.

See this [inform](#) to have a more detailed view on the announcement and on India MEG market.



ENEOS will shut Chita petrochemical site in Japan and sells its PX plant to Idemitsu Kosan

Darryl Xu, 20 November 2020

Issue

- Japan's largest oil refiner, ENEOS, will close its aromatics facilities at Chita (Japan) by October 2021 as part of restructuring efforts.
- In addition, ENEOS has also agreed to sell its 400 ktpa paraxylene (PX) asset and associated facilities to Idemitsu Kosan.
- Idemitsu Kosan currently operates a 160 kbd refinery in Aichi.

Implications

- ENEOS's Chita PX lines are not integrated with a refinery and get their feedstock from a standalone reformer at the site.
- The non-integrated PX site has always faced margin pressure during aromatics downcycles, and ENEOS has idled the PX lines for much of this year in response to an extended margin squeeze.
- After acquiring ENEOS's PX assets, Idemitsu Kosan will presumably work to integrate them with its refinery.
- Idemitsu Kosan has excess mixed xylenes (MX) in its refinery system, with only a 170 ktpa MX unit commissioned at its Aichi Refinery in 2018. The 400 ktpa Chita PX asset would provide an outlet for Idemitsu Kosan's MX supplies.

Outlook

- ENEOS has decided to cut its losses by selling one of its marginal PX production sites to a domestic competitor.
- Idemitsu Kosan would need to find an efficient and cost-effective way to integrate the Chita PX units with its Aichi refinery in order to reap the benefits of integration.
- The PX market is forecasted to remain weak for several years due to gross oversupply, and many PX producers will struggle to stay afloat.

African PET Market - A Future for Growth

Gareth Lamb, 18 November 2020

Rapidly increasing young, urban populations within Africa will result in sustained and substantial growth in future PET demand. Whilst Africa has struggled economically in the past, it has the potential to become one of the major sources of global growth for PET resin.

In this [insight](#), we review the potential growth in demand for PET within the Africa continent and recent trends in market development and sustainability. This study includes:

- African regional profile - review and outlook for PET production and consumption



- What the African Free Continental Trade Area (AfCFTA) means for PET
- Trends in key end-use applications and market drivers
- Sustainability: investment and innovation within Africa

Key signposts for the chemical industry under a Biden administration

Nathan Schaffer, 13 November 2020

The US presidential election regularly captures attention worldwide, but the 2020 race stands out given the polarizing atmosphere, media coverage, and prolonged result. At the time of this writing, Biden is expected to be the president-elect, while the legislative branch control is undetermined. At this stage, the Chemicals industry is expected to see few, if any, direct impacts. However, there are several factors that should be watched closely as these developments will indirectly shape Chemicals markets.

See this [insight](#) to learn how Wood Mackenzie experts are assessing the likely policies from the Biden administration and their implications across the chemicals industry value chain including:

- Feedstock costs (oil, NGL prices)
- Regulatory environment
- Chemical demand
- Trade patterns

Chemical solutions: can chemical recycling improve the sustainability of the chemicals value chain?

Guy Bailey, Ashish Chitalia, 12 November 2020

Welcome to Chemical Solutions Insights series. In this series, Wood Mackenzie will assess the potential of key technological and material developments that could abate the plastics industry's environmental impact.

The plastics industry is striving for a sustainable change. From refiners to consumer-facing brands, the industry is putting both intellectual energy and investment into trying to find solutions that reduce the negative impacts of this linear economy. There is no one, single lever that can be pulled to deliver the necessary changes; instead, it will be the cumulative impact of lots of changes made by consumers and companies that determines whether these efforts will be enough.

In our [second Chemical Solutions insight](#), we explore the current state of play in chemical recycling. We look at what is driving interest in chemical recycling technologies, evaluate potential pros and cons, and explore what it will take for chemical recycling to scale in the plastics value chain.



Fulgar and Solvay launch polyamide fibres with antiviral and antibacterial properties

Timur Zilbershteyn and Quentin de Carvalho, 12 November 2020

Issue

- During the Covid-19 outbreak, some companies launched polyamide (PA66) fibre and fabrics with antiviral and antibacterial properties.
- Solvay (Belgium) and Fulgar (Italy) have recently developed a polyamide-based (PA66) antibacterial fibre called Q-Skin. Similarly, Ascend (US) developed the world's first antimicrobial microfibre called Acteev.
- According to these producers, those antiviral and antimicrobial properties persist throughout the lifetime of textiles produced from those fibres, and the effectiveness remains unaffected by washes.

Implications

- Fibre companies are responding to the global health emergency and increased awareness of the public about viral and microbial infections. Demand for masks and clothes with antiviral and antibacterial properties has sharply increased in recent months.
- Antimicrobial fabrics were known before the pandemic and have been mainly used for sport-related articles to prevent unwanted odours. Now, these fabrics are re-targeted for antiviral textiles, such as face masks. However, in many occurrences, the antimicrobial agent is adsorbed on the fabric surface and gradually diminishes upon washing. Also, the often-used nano-scaled silver washed for manufacturing those garments was shown to contaminate wastewater and adversely affect aquatic life.
- A chemically-bound antimicrobial agent is advantageous as it prevents the agent to be released on the skin and to contaminate wastewater. For the announced technologies, active ions are embedded into the polymer matrix. For instance, Ascend's Acteev is based on zinc ions, whereas Solvay and Fulgar's Q-skin is based on silver ions. These technologies are specific for polyamides and their mixtures with other polymers.
- It is uncertain whether the demand for antiviral properties in everyday clothes will be sustained. Most bacteria and viruses are removed from fabric with conventional detergents during washes. But some customers may feel more secure if their clothing could reliably repel viruses and not becoming the source of infection.
- From the environmental standpoint, antimicrobial properties in polyamide fabric may cause concern in the long term, as they will slow down fabric degradation in the landfill. While recycling and incineration would be the best way to manage these fabrics post-use, there is little to none polyamide fabrics that have been recycled so far.

Outlook

- Textiles demand fell sharply during the first wave of lockdowns due to the global pandemic. The subsequent recovery recently came under stress as the second wave hit Europe and the US.
- We will likely see similar attempts from other companies to differentiate themselves from their competitors, because certain demand segments, especially those related to health and personal safety, are performing much better than others.



- The high-performance polyamide fibre was not among the winners, with a few exceptions such as use of polyamide in elastic bands of face masks. But the versatility of chemical modification, which allows permanent adding of antimicrobial properties to the fabric, can improve polyamide’s market position in the current environment.

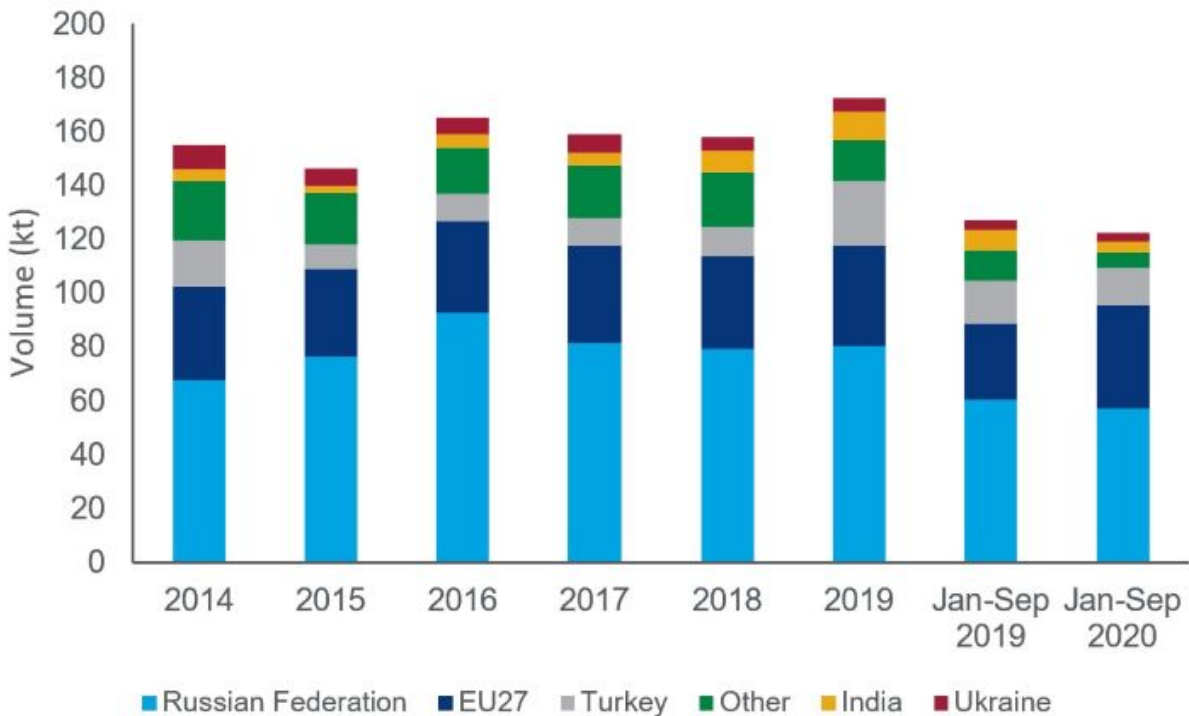
GrodnoAzot strike challenges synthetic fibres production in Belarus

Alexei Sinitsa, 9 November 2020

Issue

- Belarus is among the world’s top manufacturers of synthetic fibres per capita. However, the entire synthetic fibres value chain, including ammonia, caprolactam, tyre cord, nylon polymer and fibres, is solely manufactured by the state-owned GrodnoAzot.

Belarus man-made fibres (MMF) exports by destination



Source: Global Trade Tracker

- Strike activity from GrodnoAzot workers has been surging in Belarus, with picket lines at the factory gates in Grodno. Authorities have pushed back by dispersing picket lines and bringing in replacement workers.

Implications

- GrodnoAzot is both a major foreign exchange earner and a key supplier for Belarus’ petrochemical and associated industries. Any disruption to its operations would deal a severe blow to the integrity of the country’s industrial sector and the State’s coffers.
- Following initial denials of the threat posed by the Covid-19 pandemic, the ballooning number of cases are driving the point home. As of early November, more than 100,000 cases have been reported (out of a total population of 9.4 million).



- For a highly modernized manufacturing facility like GrodnoAzot, the outbreak impact poses additional challenges compared to less efficient plants. GrodnoAzot has received significant investments from the State to upgrade capitals related to nylon PA6 polymer, filaments and tyre cord fabrics production.
- Protest activity in Belarus has been escalating. Before 25 October, the protests didn't affect GrodnoAzot operations, with most demonstrations happened outside of the factory gates and employees participated outside of their working hours. Since 26 October, reports of violent dispersal of pickets, arrests, dismissals, strikes and sit-ins have come via both official and opposition sources.
- Authorities went public with their plans to bring replacement workers to support GrodnoAzot operations during these difficult times. The opposition labelled these efforts as strike-breaking, and warned for an imminent workplace tension, with potential productivity and safety issues due to new personnel operating unfamiliar equipment.

Outlook

- Until now, the situation remains tense and outcome is far from certain.
- Risks escalate for all sectors downstream of GrodnoAzot – both domestic customers (including farming sector and Belshina Tyre Works) and international clientele.
- The situation could remain until a political solution is achieved in the Belarus' power struggle.

In Focus: OMV and Mubadala complete Borealis transaction for \$4.68 billion

Patrick Kirby, 2 November 2020

OMV, the international integrated oil and gas company headquartered in Vienna and Mubadala Investment Company, the Abu Dhabi-based strategic investment company, yesterday completed the transaction for OMV to acquire an additional 39% stake in Borealis. The transaction price was \$4.68 billion and raises OMV's share in Borealis to 75%. Post the transaction, Mubadala still holds the remaining 25% share in Borealis.

The deal acts to increase OMV's owned ethylene footprint in the United States and the UAE. For Mubadala, the deal is the second this year following its exit from the Novealis JV and highlights an overall reducing of exposure to the ethylene industry.

Please click through to access the full insight on our new [centralised landing page](#) for *In Focus* content. We encourage you to bookmark the landing page to always have access to the latest content. To see Wood Mackenzie's view of the feedstock position for every ethylene plant globally and new projects that we expect to come into the market, navigate to the [Ethylene Asset Cost Tool](#).

Five reasons why polyethylene markets are largely resilient in 2020

Ashish Chitalia, 2 November 2020

Coronavirus has hit the world economy. Wood Mackenzie expects global GDP growth in 2020 will contract by 5.4%, and this is already weighing on the consumption of major commodities. The impact on petrochemical industry margins has also been noticeable, mainly attributed to overcapacity and low crude oil prices. However, demand in this sector has been slightly more resilient, thanks to the versatility of polyethylene.

In this [insight](#), our team evaluates why polyethylene markets are growing when the global economy is weakening.



We go well beyond the traditional GDP elasticity matrix and understand how granular tracking of the global polyethylene market can spot the structural changes in demand patterns.

Five matrices are,

- 1). Chinese polyethylene market
- 2). The trend towards temporary stockpiling - is it temporary?
- 3). How low oil price supports polyethylene consumption?
- 4). Is recycled polyethylene still economical?
- 5). What are the structural demand changes?



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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.

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