November 2021

Essential insights into the global biaxally orientated film industry

ORIENTATE

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Market Report

AMI

IN THE NEWS

Packages Limited to take full ownership of Tri-Pack

Following clearance by the Competition Commission of Pakistan (CCP), leading Pakistani BOPP producer Tri-Pack Films is to come under full ownership of Packages Ltd following Mitsubishi's decision to exit the Pakistani market. According to the JV agreement, Packages had the right of first refusal to purchase the entire shareholding of Mitsubishi. Packages had entered into a Share Purchase Agreement on 8th June, 2021 for the purchase of entire shareholding for PKR1,159.65 million (USD6.8 million) subject to corporate and regulatory approvals.

The Pakistani market in transition as Mitsubishi exits BOPP JV and Macpac latest producer to announce new BOPP investment

Tri-Pack Films is the leading supplier of BOPP film in Pakistan where it has a market share of almost 50% in terms of capacity. The CCP concluded that the transaction would not improve Package's already dominant position in the marketplace, highlighting that the company already has management control of Tri-Pack, which already has substantial market share.

Tri-Pack was founded in 1993 as a JV between Packages Ltd., a Pakistani converter, and Mitsubishi Corporation of Japan, with the aim of providing quality flexible packaging materials for the Pakistani market. Starting with a 4.2 metre line at a plant in Hattar in North West Pakistan, where it added a second line in 2001. A second plant was established in 2004 at the Port Qasim Industrial Zone in Karachi. The company expanded into CPP film production in 2008 and in 2013 commissioned its fourth BOPP line. At the start of 2021, a stock exchange announcement confirmed Board approval of a new BOPP line, a 10.4 metre wide Brückner planned for commissioning in 2023.

LG and Toray confirm Hungarian battery separator JV

South Korea's LG Chem and Japan's Toray Industries have agreed to set up a battery separator films JV in Hungary. Both companies will be spending more than KRW1 trillion (USD854.7 million) to produce more than 800 million square metres/year of separator film by 2028. A factory will be built on the site of the existing Toray Industries Hungary plant in Nyergesújfalu, with construction to commence during H1, 2022. Separators from the new plant will be supplied to battery manufacturers across Europe, including to LG Energy Solution's plant in Poland.

LG Chem and Toray are to initially hold a 50% stake each in the JV, but LG Chem plans to acquire 20% from Toray after 30 months in order to secure management control. LG Chem said it aims to be the leader on the European market by combining its own coating technology with Toray's film capabilities. Toray is considered the world's third-largest wet separator manufacturer. In July 2021, LG Chem took over the separator coating business from LG Electronics and currently operates separator coating plants in South Korea, China and Poland. The global market for battery separator films is forecast to nearly triple in value by 2025 according to leading research.

Chinese BOPA investments continue at pace

In China, Cangzhou Mingzhou has announced it is investing in four BOPA film lines adding a total of 76,000 tonnes/year of new production capacity. Two lines will be installed at BOPA film subsidiary in Cangzhou City and a further two lines at a new battery separator film plant - Wuhu Mingzhu Membrane Technology Co, to be located in Wuhu City, Anhui Province, where the company plans to invest in the construction of a wet-process lithium-ion battery separator film project with an annual output of 200 million m². The company currently runs 6 BOPA lines, the most recent of which are self built, with a total annual capacity of 35,000 tonnes/year and this investment will be the company's first BOPA capacity expansion in over 7 years.

Cangzhou Mingzhou was founded in 1995 as an HDPE pipe and fittings manufacturer supplying customers worldwide. In 2003, the company expanded into BOPA film commencing production on a 5,000 tonnes/year DMT line. As part of expansion plans, the company listed on the Shenzhen Stock Exchange in 2007 and the following year entered into the lithium battery separator business. In 2009, the company acquired the assets of BOPA manufacturer Shandong New Dongli Plastic Company which included a manufacturing facility in Shandong Province housing two Brückner lines. The same year the company set up its BOPA film business as a wholly owned subsidiary. In 2010 the company successfully put into production its first self-designed and built simultaneous stretching BOPA line and has continued to invest in both its BOPA capabilities and capacities, installing a further two self built BOPA lines in recent years.

Further line investments confirmed for Oben

In South America, Oben Group is further expanding its capacities, ordering two lines from French biax equipment supplier Marchante, a 20,000 tonnes/year capacity OPETG line for shrink films and a 15,000 tonnes/year capacity BOPA line, to be installed in the group's new Colombian plant. Both lines will use Marchante biax technology and are expected to be commissioned by Q1, 2023.

Oben has also recently signed with Dornier for a new high capacity BOPET line in its new greenfield facility in Brazil as it forges ahead with plans to establish a significant manufacturing presence in Brazil. Initially, the company plans to move an existing biax line to Brazil, to commence production as soon as possible. Manufacturing in Brazil will commence as soon as at the end of 2022.

Indian biax majors announce strong Q2 sales

Indian BOPP pioneer, Cosmo Films, reported revenue growth of 36% during Q2, 2022, to INR759 crore (USD102.5 million) compared with Q2, 2021, and EBITDA growth of 54% to INR152 crore (USD20.5 million) attributed in part to higher speciality film sales and better operating margins.

For Q2, 2022, Uflex announced its highest ever revenues of any quarter, an increase of 36% on Q2, 2021, to INR30,362 million (USD409.9 million), attributed to strong demand for packaging films and the new lines recently commissioned. Packaging film production increased 33.5% to reach 124,670 tonnes/year with sales volumes increasing 31.5%. although profit fell from INR4,729 million (USD63.8 million) to INR4,245 million (USD57.3 million) due to high raw material costs and the new lines being commissioned, India Ratings upgraded Uflex by two notches to 'IND AA-' reflecting an improvement in the business' profile.

SRF's Packaging Films Business reported an increase of 29% in its segment revenue to INR1,076 crore (USD145.2 million) for Q2, 2022 compared with Q2, 2021, although operating profit declined 27% to INR181 crore (USD24.4 million). Commenting on the results, SRF stated that significant supply chain challenges, and the availability and price of key raw materials was a major concern. SRF reported that BOPET margins were negatively impacted because of demand supply imbalance in H1, 2022, but BOPP film demand remained strong. The start up of new BOPET and BOPP lines is also expected to put pressure on industry margins going forward.

Jindal Poly Films also announced a strong set of Q2 results with revenues at INR133,221 Lacs (USD178 million) up significantly from INR94,489 Lacs (USD127 million) in Q2, 2021, although revenues now includes the recently acquired European BOPA film production unit of Domo. Profit before tax for the films business was INR27,732 Lacs (USD37.3 million).

CONVERTER NEWS

Coca-Cola announces green inititives

The Coca-Cola Company, Changchun Meihe Science & Technology, and UPM have announced their collaboration on plant-based monoethylene glycol (bMEG) for packaging applications. The collaboration is aimed at commercialising the production of renewable glycol and fossil fuel-free PET plastic, of which bMEG is a key component, as part of the company's efforts to eliminate its use of petroleum -based PET in plastic bottles by 2030 in Europe and Japan. First validated at demonstration scale in 2017, the technology is now set to be scaled up at a biorefinery currently under construction by UPM in Leuna, Germany scheduled to start production in 2023 with a capacity of 220,000 tonnes/year of bio-PTA.

Coca-Cola launching first-ever labelless PET bottles in South Korea, aligning with government's mandate to enhance plastic bottle recyclability by eradicating labels on plastic bottles

Coca-Cola is launching its first-ever labelless PET bottles in South Korea called Coca-Cola Contour Label Free. The move aligns with the national government's mandate to enhance plastic bottle recyclability by eradicating labels on plastic bottles. The iconic contour shape helps consumers easily recognize the brand despite it not having a label. Creating and recapturing high-quality recyclable PET bottles is high on Coca-Cola's agenda, having recently been named the number one global polluter for the fourth consecutive year.

Flexible packaging transactions continue across North America and Europe

The consolidation of the North American and European flexible packaging industries continues as small and medium sized converters are acquired by large, global consolidators or private equity backed companies. Further announcements in the past month include:

US group ProAmpac's acquisition of two companies in Ireland dedicated to the production of flexible packaging for the food industry - Irish Flexible Packaging and Fispak, both held by IFP Investments Limited. Irish Flexible Packaging and its subsidiary Fispak operate two factories in Naas and Carnew producing flexible packaging for the dairy, bakery, meat, fish and cheese packaging industries. ProAmpac has made a string of flexible packaging acquisitions in the UK and Ireland in the past year, acquiring Euroflex, also in Ireland, in addition to Rapid Action Packaging, IG Industries, Brayford Plastics and Ultimate Packaging, all based in the UK.

In North America, C-P Flexible Packaging has acquired Sycamore Sales Inc., also known as Preferred Packaging, for an undisclosed sum. Preferred Packaging is a manufacturer of multilayer flexible films, thermoformed containers and a supplier of tray sealing equipment for meal solution providers and school systems;

ProMach, a global provider of packaging machinery solutions, has acquired CL&D Graphics and CL&D Digital comprising of four locations across Wisconsin and South Carolina operating numerous flexographic and digital presses. CL&D Graphics offers roll-fed film and pressure-sensitive labels, shrink sleeves, pouches, lidding, and preprinted thermoform solutions to consumer packaged goods companies across North America.

France to ban plastic fruit and veg packaging

France will ban plastic packaging for nearly all fruit and vegetables from January 2022 in efforts to reduce plastic waste. Implementing a February 2020 law, the government has published a list of fruits and vegetables that will have to be sold without plastic packaging from 1st January 2022. The list includes leeks, aubergines and round tomatoes as well as apples, bananas and oranges. Cut fruits and a limited number of delicate fruit and vegetables can still be sold with plastic packaging but this is to be phased out by the end June 2026.

SUPPLIER NEWS

DuPont PA business for sale; DuPont Teijin Films included

DuPont has announced a series of actions in support of its strategy to focus on high-growth, high-margin businesses. As part of this, it has entered into an agreement to acquire advanced materials manufacturer Rogers Corporation for USD5.2 million in cash and has announced it is to divest a substantial portion of its Mobility & Materials segment. The businesses for sale are predominantly those within engineering polymers and performance resins including its entire global PA business with approximately 330,000 tonnes/year of global polyamide 6.6 capacity. It also includes the company's share of BOPET and PEN film producer DuPont Teijin Films.

DuPont Teijin Films was established in 2000 as a 50:50 global joint venture combining the BOPET film activities of chemical companies DuPont and Teijin, together with their JV with DuPont-Hongji Films Foshan in China. The company produces speciality and technical BOPET and PEN films targeted at high end applications with an operating capacity of 150,000 tonnes/year from 6 manufacturing facilities located in China, Europe and North America. The company has had uncertain ownership of late, being up for sale / rumoured for sale on several occasions as DuPont has transformed its business.

New announcement puts DuPont Teijin Films up for sale as DuPont looks to focus on high-growth, high-margin businesses

The Mobility & Materials segment has been the weakest performing of DuPont's three business segments in recent years, the others being Water & Protection and Electronics & Imaging. A new organisational structure has yet to be announced, but electronics, industrial technologies and the next generation of automobiles have been named as new pillars for the group.

Chemical recycling accelerates in the US

Driven by continued strong demand for recyclate by leading consumer goods companies, chemical / advanced recycling announcements continued to dominate the news.

Building on their European collaboration, Plastic Energy and TotalEnergies have announced a strategic partnership in the US with a 33,000 tonnes/year capacity recycling plant to be built in Texas due to be commissioned in 2024. Under the agreement, Plastic Energy and Freepoint Eco-Systems will build an advanced recycling plant in Texas employing Plastic Energy's patented technology, with TotalEnergies converting the raw material into virgin-quality polymers, which can be used for food-grade flexible and rigid packaging.

ExxonMobil has also announced plans to build its first large-scale advanced plastics waste recycling facility in Baytown, Texas. The company said the facility will scale-up a proprietary recycling process for converting plastics waste into raw materials that was validated in a trial test in Baytown earlier in 2021. The plant due to be commissioned by the end of 2022, is to initially have an input capacity of 30,000 tonnes/year of plastics waste but the company plans to add up to 500,000 tonnes/year of advanced reclaim capacity globally by the end of 2026.

China: ExxonMobil has announced it is to proceed with a multi-billion dollar chemical complex in the Dayawan Petrochemical Industrial Park in Huizhou, Guangdong Province. The complex will produce performance polymers for a variety of end-use markets including packaging, and includes three performance PE lines and two differentiated performance PP lines.

The Netherlands: Total Corbion PLA is offering the "world's first" commercially available bioplastic produced by chemical recycling. The Luminy rPLA range is partially made from post-industrial and post-consumer PLA waste with the same properties and characteristics as virgin Luminy grades, and the same regulatory approvals allowing food contact. rPLA grades will initially be supplied with a 20% recycled content.

UK: Chemicals group Synthomer, formerly Yule Catto, is to acquire the adhesives resins business of Eastman Chemical for USD1 billion in cash. The deal is subject to regulatory approval but is expected to complete in Q1, 2022. Comprising of 6 plants globally, the adhesive resins business is to form a new adhesive technologies division of Synthomer with Eastman's tackifying resins and additives for adhesive products for core markets including tapes & labels and packaging at its core.

Thailand: A fire at Siam Cement Group's Map Ta Phut olefins complex on 26 October, has resulted in two deaths. The fire broke out at a naphtha tank, which had been shut down for cleaning and maintenance, but operations were unaffected with three other naphtha tanks at the complex able to continue as usual. The Map Ta Phut olefins complex has a nameplate capacity of 1.3 million tonnes/year of

ethylene and 850,000 tonnes/year of propylene.

Japan: Mitsui Chemicals has signed a patent license agreement for bio-polyester with Mitsubishi Chemicals, enabling Mitsui to manufacture and sell bio-polyester made from biomass in light of 2050 decarbonisation goals. Mitsui is considering producing bio-PET at its Iwakuni Otake petrochemical complex in Yamaguchi prefecture.

Pakistan: Siegwerk and Rotopack have formed a JV to serve customers across Pakistan. Construction of a new plant in Karachi has commenced and it is expected that Siegwerk Pakistan Ltd. can start operations on 1st April, 2022. Production will focus initially on inks and coatings for flexible packaging applications, and then be expanded to other packaging segments, including water-based and UV products.

UK: Sabic is to restart its Wilton steam cracker after an £850m investment. The facility has a capacity of 865,000 tonnes/year of ethylene and 415,000 tonnes/year of propylene. The cracker was shut down in September 2020 for planned maintenance and is reportedly to be restarted in 2022.

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FILM AND RESIN PRICING

			BOPP film (1)			Homo PP (1)		
Region	Film gauge		Nov-21	Oct-21	Sept-21	Nov-21	Oct-21	Sept-21
Europe	30µ	EUR						
NAFTA	17.5µ	USD						
China	30µ	USD						

(1) Price per tonne

IN CONVERSATION WITH:

Mr. Sambhav Oswal

Executive Director

Nahar Poly Films

Sambhav is Executive Director at Nahar Poly Films, responsible for managing the day-to-day operations at the company. He represents the fourth generation in the Nahar Group, established in 1949, which has grown to become a leading Indian conglomerate with a strong presence in textiles. Having done his Bachelors in Business Administration from Marshall School Of Business, University Of Southern California, USA, Sambhav has been at Nahar Poly Films since 2015 and has been instrumental in the company's new investments.

Here he talks to Orientate about the strong and steady growth at Nahar Poly Films and the company's ambitions for its future in the fast-growing flexible packaging space.

OR: For those of Orientate's readers less familiar with Nahar Poly Films, please could you provide a brief overview of the company?

SO: Nahar, as a Group, is primarily in the textiles business. Nahar Poly Films was started in 2011, as a diversification play, so that as a Group we weren't entirely focused on textiles. We wanted to enter another fast-growing industry. It was my father's vision to start Nahar Poly Films. The original plan was to venture into BOPP first, and then into BOPET, and have a whole 'one stop shop' solution offering all the substrates. However, given that there are so many polyester lines coming on stream, when we decided to invest again, we felt more comfortable with BOPP rather than BOPET. We have gotten to know our BOPP customers base well and the products they want, and this was our preferred option rather than entering a new segment. Our first line was 3-layers, and this line is a 5-layer line, enabling us to offer a much wider range of films, such as white films, cavitated films, and pearlised films.

OR: What is the company's strategy?

SO: Our strategy as a Group and an Indian company is safety over growth. We are an ethical company, and we are reputed in India to be a tightly controlled family business. Our strategy is always to make sure that our relationships with the key supplier partners, whether it be our raw material suppliers, our machinery suppliers, our end customers, or the people who work for us, are carried out in a very ethical manner.

As far as the product and business is concerned, our strategy is to move along with the industry. If there is more demand for high barrier films, we make sure that our new investment in a metalliser from Bobst has a high barrier metalliser. In the future, if we see that BOPE / hybrid is picking up, we will look at that. So, the strategy is to move along with the industry, safety over growth, and to make sure we conduct our business in an ethical manner with all our partners.

OR: What is your USP? How do you differentiate yourself from other producers of BOPP film?

SO: Nahar Poly Films' USP so far has been its ability to offer a different range of products from just one line. Usually it is challenging for a film supplier to keep switching between different product grades while running a single line but thanks to our talented production team, we have been able to consistently serve the different product needs of our customers fairly well.

OR: Nahar is investing in a second BOPP line - what is the reason for this investment and what additional features or benefits will you be able to provide? Are there any further investments you can share?

SO: We expect the commissioning of our second line to take place in January 2022. We ordered it in the early summer of 2019 when we became debt-free, and we felt it was the right time to make an investment in a new line. We wanted to offer more BOPP products, which we were not able to offer with our existing BOPP line, as we were getting more demand than we could supply. Our existing customers were asking us to supply them with more films and we felt that it was the right time.

We are also currently installing a new Bobst metalliser, a K5 metalliser able to offer low OTR BOPP, which will be something new for us. We already have a 2.4 metres wide Bobst metalliser and this second metalliser will be 2.8 metres wide, following the trend of going ever wider.

OR: What sort of year was 2020 for Nahar Poly Films and what is your expectation for 2021?

SO: 2020 was a very interesting year. The lockdown in India happened on March 25th and we had our factory shut down for three weeks. Luckily, we were able to get it back up and running, as we were in the essentials category, and we were able to get all the permissions to run our factory. We were able to create a safe environment for our employees with distancing and other measures. Product demand was buoyant, and in this respect, covid was a blessing in disguise for the industry as demand has never been so good.

Q1, 2021 there was an extreme raw material shortage driven by the Texas freeze, that was a little unnerving, and we had an unfortunate accident - the new extruder for our new line was in a container that met with an accident and, as a result, our extruder got damaged, and we had to order a new one. At the same time, the German engineers from Brückner who had come to our plant had to return home because lockdown 2 was implemented, so March and April 2021 were a bit of a roller coaster for us. We were supposed to start our second line in July but, because of covid, the lockdown and the extruder damage, it was extended until January next year.

At the same time, we didn't loose focus on supplying our customers from our line #1 and now we are finally on our way. A six-month delay in these times, makes a lot of difference, due to the strong profitability and demand the industry is currently enjoying, so I can't wait to get the line started and see a strong start to 2022.

OR: Sustainability is top of the agenda within the packaging industry, particularly in Europe and increasingly in North America. What is the situation in India? What is Nahar doing to address the sustainability challenge?

SO: We are a member of the flexible film manufacturing association in India. The Indian government is actively considering imposing ERP by which each plastics producer needs to recycle post-consumer waste equal to its annual sales, and we are following the situation closely.

OR: Are there any particular features or changes in film structure or film type that your customers are increasingly asking for?

SO: With the existence of only one line, we were more focused on sales in India. In general, Indian customers have been asking for basic packaging films for conversion but gradually the focus is shifting to high barrier and metallised films A lot of activity is happening in the in-line coating space, so with our new line we have in-line coating, and we look forward to exploring products with that as well. Most of the new lines have this feature as a provision but not everyone has invested in this feature. For surface improvements, a lot of customers will ask for in-line coating and all these products are going to help make the product more recyclable.

OR: What are some of the key challenges affecting the biax film industry globally and what could companies be doing to address these?

SO: In India, as a BOPP film manufacturer, we have access to the same equipment and same raw material that companies from around the world have. The only issue is that in India, when you are traveling by road or any transportation and you look around, you will be able to see pouches and other laminated structures lying in the road, littering, and damaging the environment. I feel the major issue is the collection of waste and there needs to be more active participation from users, the government, and NGOs, to come together and be able to participate in a way that there is efficient collection of waste and that it is efficiently processed in the recycling system.

The problem is that whilst the collection of PET bottles is very efficient, the incentive for the collection of BOPP and BOPET laminates is lacking because the material is so light, the folks who are supposed to collect it are not incentivised as it would take them many times as long to collect it than plastic bottles. So, I feel that the incentive structure should be changed away from weight. We look forward to being more active in this space. As we get bigger in the flexible packaging business, we hope to be more influential, and joining the relevant industry associations is a start.

OR: What improvements in material or process would be of help to your team or the wider biax film industry?

SO: There is no issue in the quality of the resins and equipment available out there, the only issue is the consistent availability of raw material. Because we are consuming ever more, there is not always an easy availability of raw material, and it has been particularly challenging this last year. What we would like to see is more consistent availability of the necessary grades of material for packaging, that would help us.

OR: What are the biggest challenges you face in running your business on a day-to-day basis?

SO: The biggest challenge running just one line has been in matching the industry's standard lead time. Most of our customers buy their film from other folks as well and the lead time from them is 5 to 7 days, whereas if they buy from us, it is 15 to 20 days, so that has been the main challenge. Now coming in with the second line, I'll be able to match the industry standard of 7 days. Other than that, we are fairly streamlined, and we have been able to handle business in a smooth manner. We are blessed with a good and talented team.

OR: What do you consider to be the main long-term challenges you face in your work? Or put another way, what keeps you awake at night?

SO: Plastics has a bad name, even in India it has negative connotations. So, one of the challenges is to set up a good system of recycling and inform people that without plastic, life is not really possible, Covid has taught us that. But people have a short memory, and there is the worry that without the active participation of all involved trying their best to bring about a change, things will go back to the way they were. There is often a lack of willingness and a degree of complacency that someone else will do it but if the collection of used plastics is addressed, then that would really help.

MARKET REPORT:
Biax films in the Arabian Peninsula

This month, Orientate reviews the status of the biax film industry in the Arabian Peninsula comprising the Gulf Cooperation Council (GCC) countries of Saudi Arabia, United Arab Emirates (UAE), Kuwait, Oman, Bahrain and Qatar, together with Yemen and Jordan. The region is a major oil and gas producer holding 37% of the world's oil reserves and 25% of the world's natural gas reserves and, as such, it enjoys good raw material and low cost energy supplies. It is a mixed area with some countries considered rich whilst others suffer from poverty and war.

The area offers good growth potential with a growing population and growing private sector investment, but economic risks, security issues and political uncertainty in poorer and neighbouring countries makes the outlook challenging and market conditions difficult to predict.
The region is a major producer of biax films but, with a population of less than 100 million, much is exported and, with the shift from globalisation to protectionism, and increased barriers to international trade, the current climate presents both opportunities and challenges for local producers of biax films.

The region is a major producer of biax films but, with a population of less than 100 million, much is exported

Economic overview

If the Arabian Peninsula were a single country, it would be the world's 11th largest world economy according to GDP. With its oil based economy, the covid pandemic and resulting low oil prices of 2020 put significant pressure on the Peninsula's economies. The countries had been moving away from their dependence on oil and gas reserves and revenues, and looking to diversify their economies, embedding economic diversification into national visions. However, with oil and gas revenues providing significant public benefits and services including higher wages than the private sector, this has held back some reform efforts.

The largest country in the region, Saudi Arabia, has recently announced a budget surplus after more than 2 years in the negative due to rationalised spending and a return of higher oil prices during 2021 with the World Bank predicting the country's growth at +2.4% for 2021. Over the medium-term, growth is expected to accelerate as economic reforms begin to pay dividends, with the government taking steps to decrease the country's dependency on oil and starting to support other industries. Saudi-Arabia's "Saudi Vision 2030" involves a huge transformation agenda and intends to reduce the country's dependence on oil, diversify its economy and develop public service sectors.

The UAE is the region's second largest economy and one of the wealthiest countries. Its "UAE Vision 2021" launched a decade ago increased the country's digitalisation and privatisation, having successfully diversified into areas such as ICT, re-export and finance, and nowadays more than two-thirds of UAE's GDP is derived from non-oil related sectors.

With good strong raw material supply and cheaper energy, the Arabian Peninsula is a major producer of biax films with several sizeable players. There is an excess supply of material in the markets, with demand lower than supply, and the region remains a major exporter of biax films.

The countries had been moving away from their dependence on oil and gas reserves and revenues, and looking to diversify their economies

BOPP volumes remain strong

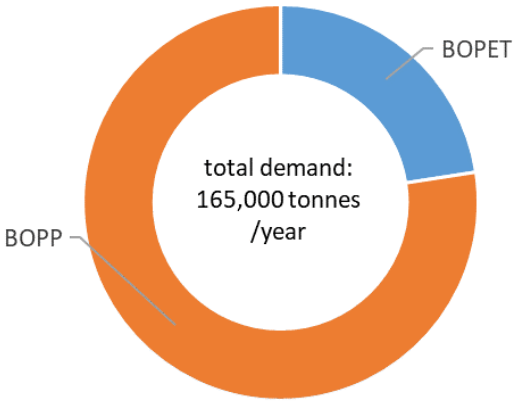
The BOPP industry in the Arabian Peninsula is well established and advanced, and home to three major players. The region usually shows utilisation rates above the industry average reflecting the skill and competency of the well-established players. BOPP film producers in this region usually attract appropriate technical personnel from the Indian sub-continent, which helps to ensure lines are well run. Local production of material has remained stable but remains at almost twice that of demand within the Arabian Peninsula, and therefore significant volumes of film are exported out of the region. Demand growth is currently tracking the global industry average abut there is the expectation this will increase as the converting and consumer goods industries continue on a strong growth trajectory.

Recent years have seen the implementation of trade-restricting measures and rising government support across a range of sectors in the region. Barriers to international trade have increased and impacted the export oriented local producers, disrupting supply chains. Saudi BOPP producers have been looking to build up their sales to Europe but volumes remain relatively modest. Imports of BOPP film into the regions are mainly coming from Europe and India, with European films largely representing speciality grades. Indian films account for significant volumes due to the many Indian-owned printer/converters who operate in Dubai.

BOPET growing strongly from low base

The BOPET film industry in the Arabian Peninsula is relatively young and was established by two Indian BOPET majors: In 2005, FlexFilms started production in the UAE followed by

Demand for biax films in the Arabian Peninsula 2021



JBF Industries in 2008, with further capacity added by JBF at a new plant, JBF RAK, in Bahrain in 2013. Capacity in the region remained stable from 2013 until 2017, until JBF RAK halted production on all four of its BOPET lines due to cashflow issues and regional capacity was again reduced in 2019 Flex Films transferred one of its BOPET lines from the UAE out of the region. During Q2, 2021, JBF RAK resumed some of its production due to strong pandemic related demand and its Bahrain facility running at full capacity. No further investment is reported in BOPET production.

BOPET demand in the region has grown strongly in recent years, not only due to the pandemic but also with the growing converting industry in the UAE and its ability to export internationally. Packaging accounts for the largest share film demand. The region has become a significant exporter of BOPET films mainly to Europe and the USA. As with BOPP, imports mainly come from India, as many Indian-owned printers/converters operate in the Arabian Peninsula. Chinese material is also starting to arrive mainly competing at the commodity end of the market but local players producing value-added BOPET films remain unconcerned with lead times for films from India and China, which are viewed to be not as favourable and the quality as less reliable.

Sustainability challenges and opportunities

The shift away from fossil fuels is one of the biggest challenges facing the region. Earlier this month at the Climate Change Summit (COP26) the governments of the Arabian Peninsula played a prominent role in discussions. Net zero announcements were made by the UAE, Saudi Arabia and Bahrain (2050 for the UAE, and 2060 for Bahrain and Saudi Arabia) and are a sign of the region's transition becoming cleaner, greener and more sustainable. Indeed, the UAE has been chosen as the host of COP28 in 2023. COP26 coincides with the Dubai Expo 2020, which has future energy and future mobility as its themes, and which signals the UAE's intention, along with its neighbours, of being a leading player in the future of global energy.

Sustainability has had some impact on the biax film market in the region, particularly where companies are exporting to Europe and North America and with companies increasingly focused on production efficiencies which improve environmental footprint. Although consumers in the region are still predominantly interested in convenience, freshness, and taste, this is changing to include environmental awareness, and local companies have started to invest in circular product portfolios and recycling capabilities.

In 2017, Saudi Arabia adopted regulatory requirements across plastic bags, and some other single-use plastics and packaging, whereby all disposable plastic products made from PP or PE with a film thickness of 250 microns or less must be oxo-biodegradable. Plans to extend the ban to include other packaging including bread bags and snack food packaging have as yet been put on hold. Many of the Peninsula's other countries including the UAE, Bahrain, Kuwait and Oman have implemented similar policies and initiatives.

Biax markets outside of packaging are also being affected by the shift towards sustainability. BOPET PV backsheet demand is growing strongly on the back of major solar investments boosted by falling technology costs. Currently, the world's biggest solar projects are to be found in Saudi Arabia, Abu Dhabi and Dubai, with a strong renewables project pipeline and the region's abundant supply of low-cost solar energy driving huge interest.

Leading players

There are 6 biax film producers in The Arabian Peninsula operating a total of 8 plants.

The leading BOPP player in the Arabian Peninsula is Gulf Packaging Industries. The company started in the early 1990s on a small Brückner line (sold in 2011) primarily to supply fledgling demand for snack and food packaging locally and to other countries in the region. A second line was added in

1999 (also now sold), with a further three BOPP lines commissioned. The company is due to commission its sixth line in Q4, 2022, increasing its BOPP capacity from a current 110,000 tonnes/year to 177,000 tonnes/year, in addition to commencing CPP production during Q3, 2022. The relatively limited market size, demand for simpler films and slower growth in Saudi Arabia means that 70-80% of production is exported with about half of this remaining within the region. The company also benefits from significant metallising capacity, focusing on high barrier transparent and metallised films and films for labels. The company prides itself on its new machine park and investing in the latest technologies.

BOPP producer, Taghleef Industries was founded in the Arabian Peninsula and has grown into a global player. The company was originally founded in 1998 in the UAE as Dubai Polyfilm Company before acquiring Technopack in Egypt and Al Khaleej Polypropylene Company in Oman. It is now one of the largest BOPP film producers in the world thanks to acquisitions in Europe (Radici Film and Derprosa), the US (AET), Australia (Shorko Films) and Latin America (Biofilm). Taghleef Industries is a privately owned company belonging to the Al Ghurair Group, a UAE-based conglomerate whose operations also include Arabian Packaging, a leading regional converter. While its assets within the Arabian Peninsula have traditionally been more focussed on commodity grades, company objective is to be present in all strategic locations and ensure that all grades can be produced at least two of its plants globally to give security of supply, thus there has been significant investment to produce specialities in the region and to be able to produce grades that can be sold in NAFTA or Europe. With this objective met, recent company focus has been on developing value added services and propositions, and becoming a consulting voice within the industry, notably within the area of sustainability.

In 2011, Rowad Industries commissioned its 30,000 tonnes/year BOPP line from DMT. When this investment was originally announced in 2007 the company, an affiliate of PP manufacturer Tasnee Petrochemicals, had announced plans for up to six lines. It unfortunately fell victim to DMT's bankruptcy in 2009 when, although the line had been installed, it was unable to complete commissioning. That was finally done by DMT's successor, Andritz Biax, in Q1 2011. The infrastructure was already in place for Line 2 and the line was eventually installed in 2015, going into production in 2016. The company has metallising capacity of 22,000 tonnes/year and has the capability to produce all the basic grades of BOPP along with some specialised films catering to specific customer needs. The company has worked towards achieving full capacity utilisation, with future investment under discussion.

For BOPET, the market is reasonably concentrated with two leading players, Flex Films and JBF RAK accounting for most of the market, with imported films taking a small share and mainly competing in the low-end commodity market. Local BOPET film producers have invested heavily in downstream processing facilities including metallising and coating lines to broaden their product mix and increase competencies in an increasingly competitive market.

Indian headquartered Uflex Group commenced its overseas expansion strategy, starting BOPET production in the region in 2005 setting up its first line in Dubai (Flex Middle East). Today the company operates a single thin line in the UAE with a 22,000 tonnes/year capacity, having transferred its second 30,000 tonnes/year line to a new greenfield facility in Russia. The company is investing USD15 million in a new 18,000 tonnes/year capacity CPP line driven by rising demand for consumer packaged goods, which will expand its product portfolio and help it gain a wider distribution network in the region. The new CPP line is due to be commissioned in Q3, 2022. The company is also evaluating whether to produce green films at its UAE facility in the near future with the growing demand for sustainably packaged consumer packaged goods throughout the region in the post-pandemic period.

Biax film capacity in the Arabian Peninsula 2021

	BOPP	BOPET
Taghleef Industries, Oman	53	
Taghleef Industries, UAE	48	
Gulf Packaging Industries, Saudi Arabia	110	
Rowad National Plastics, Saudi Arabia	60	
JBF RAK, UAE		102
JBF Bahrain, UAE		90
Flex Middle East, UAE		34
Total	**271**	**226**

In 2008, JBF RAK commenced BOPET production in the UAE, followed by a second BOPET plant in Bahrain in 2013. JBF Bahrain is located in the Kingdom of Bahrain's free trade International Investment Park enjoying geographic and economic advantages. Around half of output finds uses in packaging, with the remainder for technical applications including electrical insulation, solar panel back sheets and graphics media. JBF RAK has been beset by financial difficulties, with anti-dumping duties imposed by the US and a lack of working capital, and it temporarily halted BOPET film production in 2017, affecting supply levels in the region. Following a prolonged period of shutdown JBF RAK restarted BOPET film extrusion in April 2021 with its sister location in Bahrain at full capacity, and has been resuming production line by line ramping up to meet strong BOPET film demand.

Demand for film

The Arabian Peninsula is characterised by well-developed consumer goods and packaging markets less affected by regional conflicts and financial concerns of the wider region. Demand for biax films has grown consistently in recent years, with strong demand for MAP and barrier solutions. The UAE and Saudi Arabia represent the largest biax film markets, attracting strong investment in food processing and converting capacity driven by rising consumer demand for packaged foods and ready meals. The converting industry in Saudi Arabia is relatively concentrated with a handful key companies accounting for the majority of film demand including Printopack, Obeikan Investment Group, which has capabilities in aseptic packaging, Al Watania Plastics, Al-Aoun Flexible and Napco Modern Plastics.

The UAE has a well-developed and highly concentrated converting sector serving a growing number of food processors who supply the region. Leading converters include the Indian group Positive Packaging (since 2014 part of Huhtamaki) and Integrated Plastic Packaging together with Arabian Flexible, which is part of the Al Ghurair group. Other significant players include Emirates Technopack, Roto Packaging Materials, Best Packaging and Express Flexi-Pack. Other countries within the Arabian Peninsula have smaller industries with leading converters in Oman including Sun Packaging and FIPCO. In Yemen, Yemen Company for Packaging was a significant local producer supplying mainly national consumer goods companies in the, but much of its manufacturing infrastructure has been destroyed by war in the country.

Outside of packaging, solar has seen a huge push as location and climate make the region perfect for solar energy, due to high levels of solar irradiation with vast areas of cheap and low populated land. Costs of solar technology have also fallen, allowing for both utility and residential photovoltaics to be competitive with traditional power generation. Solar energy projects are at the forefront of renewable energy projects being established throughout the region, as part of moves away from a reliance on oil. The UAE leads the way in terms of PV deployment and renewable energy targets, aiming to generate 50% of its electricity from carbon free sources, comprising mainly solar power, by 2050. Saudi Arabia is also seeing significant development in its solar energy industry, with several large scale tenders and projects in recent months as the Kingdom seeks to transition to renewable sources of energy.

SUSTAINABILITY WITH:
GCR Group

Business background:	Established in 2001, GCR is a family-owned company. It initially focused on recycling operations and later, in 2008, expanded into compounding with a current compounding capacity of 300,000 tonnes/year, to be expanded to 500,000 tonnes/year in 2022. The company utilises its own recyclate to produce compounds, as well as selling it as feedstock for other compounders. Recycling is focused on PE and PP post-industrial and commercial clean films. The incoming post-use film is manually sorted to ensure a high quality. The company operates three production sites in Spain, two in Tarragona and one in Barcelona. Recycling is situated in Tarragona, on the same site as the compounding operations. In 2021, GCR Group inaugurated a unique Innovation Centre to provide new plastic solutions to converters and brand owners. Recyclate is sold under the Ciclic brand (industrial compounds including recyclate) and is PCR EuCertPlast certified. Masterbatches are sold under the Granic brand and the Auteno brand is for automotive compounds including recyclate.
Environmental commitment:	The GCR Group creates sustainable products for the plastics industry with an environmental commitment based on the following: • To minimise the carbon footprint of plastic products. The masterbatch of calcium carbonate, talc, silicon derivatives and other minerals, and industrial polyethylene and polypropylene compounds have the lowest carbon footprint. • To reduce client energy consumption. The minerals' greater thermal conductivity allows the materials to be heated and cooled using less energy, which is reflected in lower energy consumption for the processor. • Closing the circle. Through its production activity, the GCR Group is able to recycle plastic materials that were already in use and convert them into raw materials once again. In addition, both Granic and Ciclic are 100% recyclable. These features make the GCR Group a key company for a Circular Economy.
Granic brand of masterbatches:	The Granic brand includes masterbatches for BOPP and BOPE films that enable the use of recyclate in high percentages without affecting a film's mechanical properties, and with LCA studies confirming a reduction in the film's carbon footprint (providing support to customers to calculate).
BOPP film recycling activities:	The company has been involved in BOPP recycling for decades with the main source of post-use PP film being BOPP labels from water bottles or food packaging. Originally GCR only recycled post-industrial films, however, in the last 2 to 3 years, commercial films have also contributed volumes of feedstock.
Customer / cooperations:	Pregis, a manufacturer of protective packaging solutions, developed air cushions using Renew film containing 50% of GCR Group's Ciclic recyclate in 2020. Pregis's incorporation of Ciclic PCR in its multilayer extrusion process even enabled the company to downgauge the original virgin polymer structure without loss of performance. In 2021, the GCR Group entered into a partnership with recycler SINTAC. The companies jointly became involved in the recycling of the Madrid Plastic Museum. The Museum was established in May 2021 as a temporary 100% recyclable museum entirely build of plastic. On World Recycling Day, 17th May, it was dismantled and sent to GCR and SINTAC for recycling.

IN THE SPOTLIGHT: Vitopel do Brasil Ltda

Head office location:	São Paulo, Brazil
Date founded:	1985
CEO:	Mr. Osvaldo Coltri
Employees:	550
Ownership:	Vision Capital LLP, UK

BOPP film capacity:

	Manufacturer	**Year installed**	**Width (metres)**	**Capacity (tonnes)**
Mauá, Sao Paulo, Brazil	Brückner	1991	6.1	10,000
	Brückner	2002	7.5	26,000
Votorantim, Sao Paulo, Brazil	Brückner / Dornier	1994	7.2	17,000
	Brückner	1998	7.4	26,000
TOTAL BOPP				**79,000**

Metallisation capacity: 18,000 tonnes/year

2021 turnover: USD200 million

Business background: Vitopel was originally established in Totoral, Argentina manufacturing BOPP film from 1988. It acquired the Brazilian company Koppol in 1997 with a plant in Mauá, Brazil. In 2000 it was acquired by private equity interests and the group went on to buy Votocel in Brazil in 2005 making it the largest BOPP film group in South America at the time. In April 2012, the company was acquired by Vision Capital LLP.

In 2015 Vitopel sold the plant in Argentina to a local industrial entrepreneur, Daniel Hugo Rodriguez, owner of aluminium can manufacturer Envases del Plata, who was looking to diversify into flexible packaging. Vitopel was consequently split into two separate companies – Vitopel do Brasil and Vitopel Argentina. Vitopel do Brasil operates two plants in Brazil. It also has four metallisers and pilot line fully dedicated to the development of new products.

Product offering: Vitopel offers a full range of transparent, opaque, white, matte, synthetic paper and metallised grades for food packaging and overwrapping; self-adhesive, wrap-around and in mould labels; extrusion and wet lamination; and adhesive tapes. Films are available from 15 up to 60 microns.

Sales by film type: Speciality 35%; Commodity 65%

Sales by geography: Brazil 75%; North America 13%; Central & South America 12%

Product strengths: A strong position in food films, roll fed labels and speciality labels (both PSA and IML)

Differentiation: Vitopel has a BOPP film pilot line and R&D Centre, which allows it to work with its customers to develop intelligent and sustainable solutions for flexible films and packaging on a small scale.

Future investments: Currently under review

NEW CAPACITY:

Capacity additions are shown as being either **P -** Planned (company announcement made but order not placed or known) or **A** - Announced (line is believed to have been ordered) or **C** - Commissioned (line installed and running). We welcome comments, amendments and clarifications to this information. Any updates should be sent to Susannah Owen at AMI: susannah.owen@ami.international or call +44 117 924 9442.

Company Name	Location	Line width (m)	Line capacity (t)	Supplied by	Status	Year of Install	Type
ASIA							
						TBA*	BOPET
						2021	BOPET
						2021	BOPP
						2021	BOPP
						2022	BOPET
						2021	BOPP
						2022	BOPA
						2023	BOPA
						2023	BOPA
						2022	BOPET
						2024	BOPP
						2023	BOPET
						2022	BOPET
						2023	BOPET
						2021	BOPET
						2021	BOPET
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						2022	BOPP
						2021	BOPP
						2024	BOPET
						2024	BOPET
						2024	BOPET
						2021	BOPET
						2021	BOPET

Company Name	Location	Line width (m)	Line capacity (t)	Supplied by	Status	Year of Install	Type
						2022	BOPET
						2022	BOPET
						2022	BOPET
						2022	BOPET
						2021	BOPP
						2022	BOPET
						2021	BOPP
						TBA*	BOPET
						TBA*	BOPP
						2021	BOPET
						2021	BOPET
						2021	BOPET
						2024	BOPP
						2021	BOPP
						2023	BOPET
						2022	BOPET
						2021	BOPP
						2023	BOPP
						2021	BOPP/BOPE
						2022	BOPET
						TBA*	BOPP
						TBA*	BOPP
						TBA*	BOPP
						2022	BOPP
						2021	BOPET
						2021	BOPP
						2022	BOPP
						2021	BOPET
						2022	BOPP
						2023	BOPET
						2024	BOPP
						2022	BOPP
						2023	BOPP
						2021	BOPET
						2021	BOPP
						2021	BOPA
						2022	BOPA
						2022	BOPP
						2021	BOPP
						2022	BOPP
						2022	BOPP
						2021	BOPP

Company Name	Location	Line width (m)	Line capacity (t)	Supplied by	Status	Year of Install	Type
						2023	BOPET
						2023	BOPET
						2023	BOPET
						2023	BOPET
MIDDLE EAST / AFRICA							
						2021	BOPP
						2021	BOPP
						2022	BOPP
						2021	BOPET
						2022	BOPP
						2023	BOPP
						2022	BOPP
						2021	BOPP
EUROPE							
						2022	BOPP/BOPE
						2021	BOPS
						2024	BOPET
						2022	BOPP/BOPE
						2021	BOPP/BOPE
						2021	BOPET
						2022	BOPET
AMERICAS							
						2021	BOPA
						2021	BOPET
						2023	BOPA
						2024	BOPET
						2022	BOPET
						2021	BOPP

TBA* - To be advised

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