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# PACKAGING PAKISTAN

Volume 2, Issue 3, July - December 2017

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**Muhammad Yahya**

**Kasheer Khan**

**[aftab@rotopack.com.pk](mailto:aftab@rotopack.com.pk)**

**[sales@rotopack.com.pk](mailto:sales@rotopack.com.pk)**

**[bdm@rotopack.com.pk](mailto:bdm@rotopack.com.pk)**

**[rm@rotopack.com.pk](mailto:rm@rotopack.com.pk)**

## Editorial Note

Welcome to the 3rd edition (July-December-17) of Packaging Pakistan, our new quarterly magazine designed especially for the Packaging industries across the globe. We aim to cut through the confusion and give you a clear, sensible and reliable information from the rest of the world that you can trust.

Inside the magazine, you'll find a mixture of news, article, reports, and features on a wide range of packaging sector -related topics. We also have information on where in the world to get the most common optional processes done. Packaging has two major functions- to protect and to sell. It's impossible to say which is more important. However, we know that packaging that successfully combines both purposes can form the basis of a product's image. The packaging must match or even exceed the quality of the product itself- While the product may be superb, the packaging design must elevate the brand, setting it apart from other products.

A trademark categorizes a product and differentiates it in the market. It is the consumer's collected impression of every feature of a product. A product creates a reliable image of excellence, sincerity and happiness. Packaging brings it all together and has played a major role in days. Excellent packaging integrates all these fundamentals into a design that creates an unforgettable mark in the consumer's awareness. That, we believe, are what a VARIETY of Packaging is all about. However, the current issue focuses on the innovative methodologies to Packaging around the world like Bioplastic & its Future, RFID in Packaging, BOPET Industry outlook, Screw Cap Printing, High Barrier Pouches, Flexible Packaging Forecast, Solvents Retention, Lamination Ink & Opportunities and Challenges in Digital Printing. In relations of editorial content, previous issues of this magazine included topics ranging from green packaging, Filling Machine Trends and market Growths, Sustainability & light weighting drive PET Packaging, Printing Paper with Light Instead of Ink, Airless Packaging Market, Global Flexible Packaging Market, Demand of Plastic Films, 2-Shot Injection Molding and Sustainability in the Packaging Industry. In the current, the overall discussion will be about different type of packaging that found existing trends used by the packaging sector globally.

New tactics to packaging and processing have become a great changer now days. Clients also request eco-friendly packaged products which are light and transferrable. Preliminary adopters of expertise appear to be appreciating a better situation for both the stakeholders and the consumers. The Packaging Pakistan magazine purposes to be a spread of information, facilitating a superior cooperation between worldwide markets. We assure that you will find this issue even more exciting and educational. We also thank all our supporters, providers and advertisers for their constant support and gratitude, hopes you enjoy this issue and do let us know if there are any topics you'd like to see covered in the future.

Happy reading...

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Project Coordinator Packaging Pakistan & Secretary General FLEXPACK  
NASIR MEHMOOD RAJAURI

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### FLEXPACK Office:

505, Windsong Palace, Plot No.16-17, Block 7/8, KCHSU, Near Baluch Colony Bridge, Off: Main Shara-e-Faisal, Karachi-Pakistan.  
Phone: 009221 34150611  
Fax: 009221 34150612  
Email: secretary@flexpacpk.com  
Web: www.flexpacpk.com

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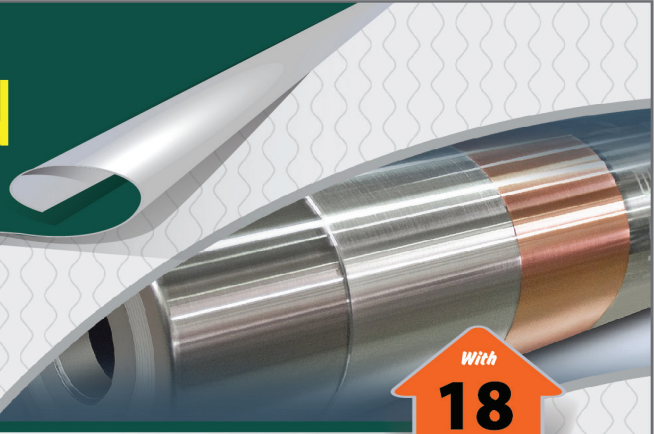
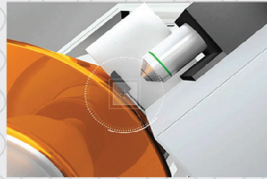
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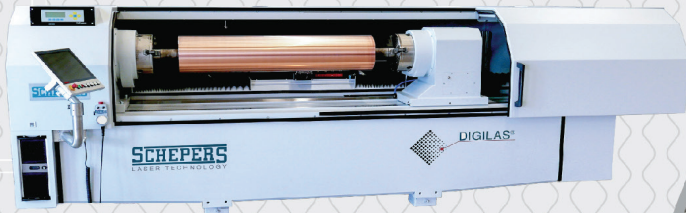
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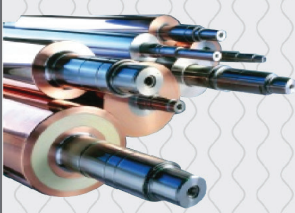
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## Winning with Flexible Packaging...

By *Tarqiu Rehman Fazlee*

CEO, *Fazleesons (Pvt.) Ltd* ([www.fazlee.com](http://www.fazlee.com))

Brand, Packaging, Promotions, Marketing, Competition, Market Share, sales target, placement, shelf life, logistics, complaints and other such jargons are a headache for every brand owner across the globe. Many of these challenges can be better handled with a broad range of materials, applications, and benefits offered by flexible packaging.

As one of the fastest growing segments of the packaging industry, flexible packaging combines the best qualities of plastic, film, paper, and aluminum foil to deliver a broad range of properties while engaging a minimum of material. With its adaptability, efficiency and sustainability, there is no better time to consider flexible packaging a winning choice.

- \* Light - weight and easy to open, carry, store, and reseal
- \* Extends the shelf life of many products, especially food
- \* Requires less energy to manufacture
- \* Innovative
- \* Widely extendible into diverse product categories
- \* Maintains and indicates freshness
- \* Offers consumer conveniences
- \* Provides re-closure and dispensing options
- \* Easy to transport and store
- \* Creates shelf appeal
- \* Enables visibility of contents
- \* Efficient product to package ratios

In Pakistan, consumer goods companies are enjoying a revolution and rapid growth of middle class which is evident from the rising demand for their goods. They are looking to offer products with flexible packaging that adds value and marketability to food and non-food products alike.

Products packaged in flexible formats are easy to open, can be easily resealed while this format also



allows for portable and single-serve products. From ensuring food safety and extending shelf life, to providing even heating, barrier protection, ease of use, reseal ability and superb printability- consumers enjoy many aspects of flexible packaging. These factors have played an essential role in meeting the needs of consumers with busy lifestyles and have helped to boost the format's popularity among consumers. Food manufacturers that are interested in expanding their offerings to better meet the evolving demands of consumers should take a close look at flexible packaging. Of the available flexible packaging formats, stand-up pouches have emerged as an effective solution for a wide range of products based on their light weight, easy display ability, and transparency that allows consumers to see the product within. Finally, Machinery manufacturers are providing more equipment options for creating flexible packaging, giving brand owners enormous options for creating their optimal packaging.

Flexible packaging makes thousands of products more convenient, enjoyable, and safer for consumers. All thanks to the commitment to innovation, technology, and sustainability that is the hallmark of flexible packaging.

## What Are Bioplastics And Its Future



Bioplastics that is, plastics derived from plants have the potential to alleviate some of the long-term pollution problems caused by conventionally made plastics. From manufacturing processes that release less global warming related pollution to the ability to biodegrade, bioplastics seem environmentally friendly. However, bioplastics are currently more expensive than standard plastics, and they might not be as eco-friendly as they seem.

What's the difference between bioplastics and regular plastics? Most plastics are made through petrochemical processes. In other words, they start out as the chemical byproducts of oil refining, which are turned into a variety of plastics through chemical processes that form long molecular chains known as polymers. These polymers give plastics their structure.

Bioplastics, on the other hand, are derived from plant-based sources. They can be made from cane sugar, corn, or from plant byproducts like wood bark and corn husks. Switch grass is another great source for bioplastics it grows pretty much anywhere, is drought resistant, and grows quickly. Since it isn't a primary food source, using it for bioplastics won't affect food prices.

You may have heard that bioplastics are biodegradable, but this isn't necessarily true. The term bioplastics refers to the plant-based manufacturing method. Some types of bioplastic are biodegradable, some aren't. Some bioplastics will degrade in your home compost bin, while some require industrial composting. In fact, many bioplastics won't degrade at all if placed in a landfill with other garbage.

Potential Uses for Bioplastics are most frequently used in packaging, although bioplastics could potentially be used

in any way that regular plastics are used. The performance characteristics of bioplastics and petrochemical plastics are very similar. There have been situations where bioplastics had to be reformulated to deal with performance problems, such as insufficient shelf-life, or those infamously loud Sun Chips bags. (When Frito-Lay debuted compostable chip bags in 2010, customers complained that the bags were too noisy. A reformulated, quieter bag was later developed.) The bottles are made from polyethylene terephthalate (PET), the exact same plastic that comes from petrochemical processes, but 30 percent comes from Brazilian sugar ethanol. The mono-ethylene glycol that results doesn't change the final chemical formulation of the plastic. However, it was created from a renewable resource (sugar cane) instead of from fossil fuels. The bottles aren't biodegradable.

Another form of bioplastics is made from polylactic acid (PLA). It's used in a variety of packaging products and even in clothing. However, it has a low melting point, so it can't be used with hot foods or liquids. Its biodegradable in the presence of oxygen, which means it won't degrade in a landfill.

Challenges Facing the Bioplastics Industry seem to have many benefits, but they aren't the perfect eco-friendly product we might hope for. For one thing, they're more expensive than

petrochemical plastics, costing between 20 to 100 percent more. The industrial processes for making petrochemical plastic have been in place for decades, so the production chain is very efficient. Bioplastics also have problems at both ends of the production cycle. While manufacturing bioplastics may not result in the same fossil fuel emissions as petrochemical plastics, the use of fertilizer and pesticides and conversion of forests to agriculture to manufacture corn or sugar cane counterbalances the benefit. Advances in the use of cellulosic plant products (like corn husks and similar materials) would also reduce the environmental footprint of bioplastics.

Biodegradability and recycling are problems for bioplastics too. It turns out that making consumer plastics biodegradable actually has negative effects on the environment. The first problem is that there are a lot of different types of biodegradability. Some bioplastics biodegrade with oxygen and ultraviolet radiation, so litter left out in the sun will degrade. However, it doesn't completely decompose, the process takes years, and it releases toxic chemicals. Some plastics are designed to biodegrade when composted, and this doesn't do any good

if the consumer doesn't compost. Only a few types will compost in a back yard compost bin, in any case. The rest require industrial composting processes. This results in a lot of confusion for consumers. Worse, decomposition of bioplastics releases methane, which is a more harmful greenhouse gas than carbon dioxide.

Worse, it's very difficult to tell bioplastics from regular plastics. If a small amount of PLA plastic is accidentally mixed into PET plastics in the recycling stream, the resulting recycled plastic products will have lesser quality and value. In other words, you'd have to separate each type of plastic from the other to minimize damage to both plastics. That also means that sticking with recyclable petrochemical plastics, or PET plastics derived in whole or in part from plant-based resources (like Coke's PlantBottle program) results in less pollution and garbage.

There are exceptions - some deployments of bioplastics have focused on closed systems, like university or hospital campuses, where the company that provides the bioplastic packaging also controls the recycling stream. They can recover nearly 100 percent of the bioplastic products and compost or recycle them using the appropriate method for that type of plastic.

If the production chain is streamlined and progress can be made on the use of cellulosic plant material to produce bioplastics, then we could see a significant reduction in the environmental impact of plastic materials. The market for bioplastics is growing slowly but steadily, so there's a good chance we'll see serious improvements in the next decade.

## Bi-axially Oriented Polyethylene Terephthalate (BOPET) Industry Outlook

Bi-axially oriented polyethylene terephthalate (BOPET) forms the heart of the packaging industry. It is a polyester film made from stretched polyethylene terephthalate (PET) resins, which indeed employ the use of purified terephthalic acid (PTA) and monoethylene glycol (MEG) as primary raw materials. The film is known for its high tensile strength, chemical and dimensional stability, transparency, reflectivity, gas/aroma barrier properties, electrical insulation as well as adhesion to coatings and adhesives which ultimately makes it a preferred substrate for various applications (fastest growing polymer substrate, with demand expected to be over 4.5 million

tonnes in 2016, market valuation in excess of USD 10.33 billion) such as flexible packaging and food contact, covering over paper, insulating material, solar, marine and aviation, electronics and others. These applications are projected to be the growing application areas of this market. The Bi-axially oriented polyethylene terephthalate (BOPET) film market is witnessing high growth in the North American and APAC regions owing to the increase in demand for its application areas.

Packaging represents the largest end-use market for BOPET film (56%), followed by the industrial (25%) and electrical/electronic (16%) segment, which includes flat panel displays. In terms of absolute growth, packaging has grown the most and it has been most evident in emerging markets, particularly in China and India. On a country level, India is the largest producer and consumer after China, closely followed by South Korea. Chinese imports of Bi-axially oriented polyethylene terephthalate (BOPET) film have decreased considerably over the past couple of years and Chinese companies are instead beginning to start new production lines for optical-grade Bi-axially oriented polyethylene terephthalate (BOPET) film. Increasingly competitive and commodity nature of traditional packaging film markets is driving film processors to seek added value opportunities by diversification into thick films or through investments in metallization or offline coating applications. New investments are being done more in hybrid lines capable of making a range of films that cut across the traditional supply divisions between thin films (50 micron) and thick films (50-350 micron) as companies look to diversify their portfolio.



During past some year, there was strong growth in Bi-axially oriented polyethylene terephthalate (BOPET) demand, which led to tight supply and relatively high margins leading to a boom in investment in the Bi-axially oriented polyethylene terephthalate (BOPET) business. However, over the last several years, this has led to an explosion of new capacity, with some 2.1 million MT installed since 2010. While global capacity has boosted by over a whopping 70%, demand has only been disproportionate, consequently leading to significant oversupply.

This oversupply scenario coupled with the falling crude oil prices has thereby resulted in weak pricing and poor margins, making the operating environment for Bi-axially oriented polyethylene terephthalate (BOPET) film processors increasingly challenging. Much of this new added capacity has derived from high productivity low-cost operations with a focus on flexible packaging applications indeed increasing pressure on heritage businesses with older and less efficient assets particularly for the production of low-cost commodity grades in developed markets of North America, Europe, and North East Asia. The industry has seen many of these companies shifting their focus on specialized technologies and high-end value

applications. At the same time, organizations such as DuPont Teijin, have opted to shutter obsolete plants as part of cost-cutting measures.

The largest producers worldwide today include Jiangsu Shuangxing Color Plastic New Materials, Toray Films, CIFU Group, Uflex Industries, SKC Films, Mitsubishi Plastics, Jiangsu Sanfangxiang Group Co. Ltd, Dupont-Teijin Films, Polyplex Corporation and Hengli group with a combined market share estimated to be over 40%. Although, the top ten producers accounted for over 60% of the total production over a decade back, their market share has plummeted considerably primarily because of new entrants that hold smaller market shares.

The Bi-axially oriented polyethylene terephthalate (BOPET) demand forecast is expected to be around 6-million MT by 2020, a CAGR of 6% from 2015-2020, but growth in some developing countries will be well above the average. The industry shall continue to bring value-added opportunities but to maintain market power, industry players need to anticipate change to formulate response strategies quickly and direct R&D investment commensurately.

## Vice Chairman (South) FLEXPACK Conducts 5th Annual Packaging Forum Expert Offer Valuable Packaging Solutions at Forum

Foreign and local professional offered new technological solutions in plastic and food packaging at the annual packaging forum 2017 held in Karachi Expo Center. The Vice Chairman (South) FLEXPACK, Mr. Khalid Khanani conducted the forum which was organized by Pegasus Consultancy Pvt. Ltd, as a concurrent event with Plasti&Pack2017 with the theme "Flexible Packaging in Pakistan: Issues, Challenges & Opportunities".

International & foreign speakers highlighted the latest developments and practices and narrated the significant features of the latest trends of flexible packaging high efficiency solutions in retail packaging, returnable transport packaging, printing inks and adhesive and

package coding for Pharmaceutical and FMCG industries of flexible /healthy packaging for consumers.





*An Exclusive Interview With:*

**Mr. Vinod Gupta**

**AGM-Sales,**

**Rajoo Engineers Limited, India**

**Packaging Pakistan:** Please tell us about your company background and its products?

It all began in 1986 and the last three decades have witnessed the transformation of a modest beginning in a relatively unknown town of Manavadar (Junagadh), Gujarat in India to an expansive global footprint with offices in India and overseas with partners world-over including Pakistan. Well-known in global circles as a mature and respected organisation with a zeal for quality, price consciousness and latest in extrusion technology, Rajoo comes with the right blend of experience, expertise and excellence.

Knowledge, experience, technology assimilation and implementation are skills harbored by the company, which resulted in a number of 'technology firsts' and the ability to suit solutions to regional needs. 'Excellence in Extrusion' is the origin, path and destination for the defining solutions offered by the company. Solutions include - the widest range of mono and multilayer blown film lines (up to seven layers), an impressive range of sheet lines (up to five layers), water quenched downward extrusion lines (up to two layers), lines for PE and PS foamed film and sheets (for various standard and special applications) as well as end-to-end thermoforming solutions. The extrusion lines cover processing of wide

range of polymers like LDPE, LLDPE, mLLDPE, HDPE, PP, EVA, Surlyn, elastomers, plastomers; barrier materials like Polyamide, EVOH; thermoformable materials like PET, PS, PP and including new generation exotic polymers. Technologies / products categories available include:

- Mono and multilayer blown films lines
- Mono & multilayer sheet lines
- Thermoforming & vacuum forming machines
- Foam extrusion systems ( chemical and physical)
- PVC Pipe and WPC (Wood Plastics Composite) plants

**Packaging Pakistan:** Please tell us where the Pakistani Packaging industry stands in current scenario. Will Industry be able to face globally and locally climate challenges?

From our perspective, the packaging industry in Pakistan is at the cusp of an exponential growth. The trends and habits are no different as compared to other countries in the region. Organized retail, working professional couples and increasing disposable incomes are growth drivers for the packaging industry in Pakistan. Since the last five years, contemporary packaging concepts have come into existence and the demand for quality and cost effective packaging has increased. The industry already competes in the world using sophisticated technology in nearly all the production processes - polymer processing, converting and downstream packaging. Facing challenges relating to climate should not be an issue since advanced technologies are being employed.

**Packaging Pakistan:** What impression did you gather by visiting the local industry?

The local packaging industry well recognizes the demands from the consumers. Most of the processors and converters are exposed to established packaging formats in the developed countries and are not hesitating to bring them to Pakistan. High levels of technology, economies of scale and energy efficiency are now well understood as compared to low technology, semi-automated machines coming from other Asian countries. Demand for high output, fully automated processing machines from India are now well established and well accepted. At Rajoo itself, we have made successful in-roads by supplying a number of blown film plants, including for barrier films.

**Packaging Pakistan:** Please tell us what are the major challenges faced to sell your product in new market.

The major challenge is the continuing political differences between our two countries. Nevertheless, the fact remains, that businesses in both our countries continue to interact with each other since there are several

advantages - same language, same culture and mindset. This is a major plus as compared to machines coming from other Asian countries.

Nevertheless, we have been able to counter the above challenge through an effective collaboration with Trade Polymerz in Karachi, a reputed name in the plastics industry. Through them, we are able to support our customers with local after-sales-service support and stocking of essential spares.

**Packaging Pakistan: Packaging Pakistan: What are the trends that are shaping the printing industry and how do you predict new technologies in the future?**

High quality packaging materials demands high technology in the machines being used. The advent of contemporary CI Flexographic and fully automated electronic line shaft (ELS) rotogravure printing machines are ample evidence of the trends. High line speeds, increased number of colours, automatic registration control system, web video, viscosity control system, automated colour matching, in-house, ink kitchens, laser engraved gravure cylinders would become the order of the day.

High quality printing and conversion necessitates fault-less substrates for processing. At Rajoo, our blown film lines meet the stringent demands of the industry. Our high output, highly automated lines incorporate multi-component material conveying, blending, gsm control and most important is the automatic thickness control and touch screen based integrated process control. The converters then are well assured of consistent quality of films with the least thickness variation and excellent roll build-up, apt for their high-speed printing and converting machines.

**Packaging Pakistan: What are the keys factors that give your Company a competitive edge over others in the industry?**

Most important factor is that we offer "value for money". We offer world-class technology at affordable price levels to ensure that our customers remain competitive in the industry. As mentioned above, we always keep ourselves abreast with latest technology trends and incorporate the same in our offerings. We

adopt a consultative approach in dealing with our customer and do not propagate just a "supplier - buyer" relationship. Based on customer's needs and market trends, we help the customer to configure the most appropriate machine, from a technology and pricing perspective. This does set us apart from many other machinery suppliers in the world.

We are one of the few machinery manufacturers in the world who own and operate a large plastic processing facility in India. This helps us in developing new machine concepts and designs, understanding different polymers and serves as a ready training ground for our customers' operating staff.

Yet, another first in the Asian plastic processing machinery segment is our Rajoo Innovation Centre that houses complete production facilities for developing barrier-packaging materials. A fully loaded seven layer blown film plant and a five-layer sheet extrusion line are already installed. The Centre is fully equipped with all testing equipment. The Centre offers various services to the industry including testing of polymers, developing packaging materials, training of operators and capacity support to the processors.

**Packaging Pakistan: You have understanding about the local market of Pakistani industry for many years. What are the remarks you have on it?**

Over the years, the packaging industry in Pakistan has well recognized the need for adopting world-class technology in all spheres of packaging - polymer processing, converting and off-course in introducing best-of-the class packaging formats. The industry is undoubtedly poised for an explosion in terms of volumes and technology. Years ahead will be extremely exciting.

**Packaging Pakistan: How do you find the potential of Pakistan market in the printing industry? How do you rate its prospects in the near future?**

We are not experts for the printing industry but the growth of the printing industry directly influences the demand of films and sheet produced on our extrusion machines. We are witnessing a great potential and an exponential growth. The industry is poised to grow with leaps and bounds and surely much higher than the GDP of the country.

**RAJOO**®  
excellence in extrusion

## HP Indigo Pack Ready to Have Commercial Launch

According to the news the HP Indigo Pack Ready Lamination system is scheduled to have its customer beta testing launch this summer and the shipping of its first units by the end of 2017. Pack Ready produces laminations for the HP Indigo 20000, 8000, and WS6800 without adhesives and is designed for immediate pouch converting.



The complete solution includes the Pack Ready Laminator and the Pack Ready Film, which has a heat-activated polymer layer that reacts immediately with the Indigo ElectroInk for quick lamination. With proper usage, the film complies with global food packaging safety regulations and is available internationally from suppliers like Polyplex and Polifilm.

## Windmüller & Hölscher Installs Miraflex II C At Admiral Packaging

Admiral Packaging has increased its printing capacities with the addition of a Windmüller & Hölscher Miraflex II C flexo printing press. The Miraflex II C is capable of printing at 1968 fpm (600 m/min) and is equipped with 10 printing



units, VISIONweb inspection system, EASY-COL colour management system, and TURBOCLEAN ADVANCED E inking and wash-up system.

According to Robert Hummell, Production Manager at Admiral Packaging, the automation systems help getting a 10 colour job printing at 1500-2000 fpm within few minutes. Admiral Packaging is based in Providence, Rhode Island and is family run in the fourth generation.

## AWT Labels & Packaging Bought Windmüller & Hölscher Miraflex Flexo Press

South Elgin, Illinois based packaging and labels producer has installed a new 52" (1320 mm) 10 colour Windmüller & Hölscher Miraflex CI flexo press. AWT has ordered the press with automated wash up decks and several setup reduction modules that allow for faster make readies and color changes, automated viscosity controls for more consistent print quality, and automated tension controls.



On top of that, the Miraflex has the capability to register a top coat to an already printed design. An AVT system will provide automated sensing of visual defects while printing. The press can accept roll widths from 31.5 - 52" (800-1320 mm) and can print an image up to 50" (1270 mm) wide. The large repeat capabilities up to 31.5" (800mm) will accommodate large format bags and pouches.

AWT intends to grow in the complex film structure business in their existing market segments and plans to expand into the pet foods and gourmet coffee segments.

## Unilever Unveils New Technology to Recycle Sachet Waste

According to the source Consumer goods maker Unilever has unveiled a new technology to tackle the worldwide issue of plastic sachet waste.

Unilever, along with the Fraunhofer Institute for Process Engineering and Packaging IVV, developed the new technology, CreaSolv Process, based on an innovation used to recycle TV sets. The technology has been adapted from a method used to separate brominated flame retardants from waste electrical and electronic equipment polymers. Under the CreaSolv Process, the plastic will be recovered from the sachet, which can be used later to develop new sachets for Unilever products.

Unilever intends to make all of its packaging recyclable, reusable or compostable by 2025, while currently only 14% of all plastic packaging is recycled across the globe. According to Unilever, sachets are resource efficient and allow low-income consumers to buy small amounts of products. Later this year, the company will open a pilot plant in Indonesia to test the long-term commercial viability of the new recycling technology. Unilever is also planning to launch waste collection schemes to collect sachets for recycling, helping to deal with the industry-wide sachet waste issue.

At present, the firm is working with local waste banks, governments and retailers to expand the recycling activities. Unilever chief R&D officer David Blanchard said: "Billions of sachets are used once and just thrown away, all over the world, ending up in landfill or in our waterways and oceans. "At the start of this year we made a commitment to help solve this problem, developing new recycling technologies." According to Fraunhofer IVV plastic recycling department head Dr. Andreas Mäurer said: "Our aim is to prove the economic profitability and environmental benefits of the CreaSolv Process."

## Linpac Introduces New Rigid rPET Solutions for Foodservice Industry

According to the source Linpac introduces new rigid rPET solutions for foodservice industry. The new range, which includes New Leaf, Pyramid Packs, Bol and event platters, will complement Linpac' portfolio of EPS Hotpacs,

catering trays, plates and bowls. Linpac said that the new range offers variety of food service packaging options for customers from a single supplier.

Linpac market development manager Mark Durston said: "Perfect for our loyal distributors, and their customers in the hotel, restaurant and catering industries, the new Linpac range can be hand or machine packed at its on-sale location. "Designed to deliver flexibility, with the ease of ordering from one supplier, Linpac has an extremely comprehensive offer."



According to the The firm said it now offers hinged-lid and film lidded rigid rPET solutions for prepared fresh food including sandwiches, salads, sushi and bakery. Linpac is planning to introduce new packaging formats and designs in 2017 to meet the demands of the food service market. With the use of sustainable fresh food packaging solutions, customers to contribute to a circular economy, the firm noted.

In 2017, Linpac and specialist films manufacturer Klöckner Pentaplast have developed new modified atmosphere pack (MAP) for fresh perishable food and liquids. The new mono PET pack has been designed to protect and preserve cured and cooked meat, cheese, fresh pasta, convenience food and liquids. Linpac is engaged in manufacturing fully recyclable rPET and PP rigid packaging for meat, fish and poultry. It has 14 manufacturing sites serving 71 countries.

## Mitsubishi Paper, Oji to Build Household Paper Plant

According to the source of news Japan's top paper maker Oji Holdings and sixth-ranked Mitsubishi Paper Mills will join hands to make household products such as tissues and toilet paper, aiming to meet demand lifted by tourists visiting the country.

The companies will invest \$43.8 million to construct a plant on the grounds of Mitsubishi Paper's Hachinohe mill in Aomori Prefecture that will come online in April 2019.

Oji subsidiary Oji Nepia will invest 30%, while Mitsubishi Paper will put up 70%. The factory will make 18,000 tons of Oji's Nepia- and Mitsubishi Paper's Nacre-brand tissues and toilet paper annually for sale mainly in Japan's northeastern region.

The factory will help Oji streamline shipments of household paper to the northeastern Tohoku region, since the distance between existing mills and the region had been an issue. Mitsubishi Paper will benefit by broadening the lineup of goods made at the site from printing paper. After the tie-up, Japan's paper market will be more heavily dominated by two heavyweights, Oji and Nippon Paper Industries.

Mitsubishi Paper wanted to take on industry giants Oji and Nippon Paper by creating a third major player. But its hopes were dashed when talks with Hokuetsu Kishu Paper and Daio Paper fell apart in 2015. Mitsubishi Paper has since grown closer to Oji, which holds a roughly 2.3% stake in the company, and plans to jointly operate a biomass power plant at the Hachinohe mill as early as 2019.



As over demand for paper falls due the aging population and the shift to electronic media, the market for cardboard boxes and household paper goods is growing thanks to rising e-commerce and more tourists visiting Japan. Domestic demand for such paper products is expected to climb for the second straight year in 2017 to a record, according to the Japan Paper Association and The Japan Corrugated Case Association.

Against this backdrop, companies are speeding up investments and mergers. Nippon Paper kicked off joint production and sales of cardboard box paper with Tokushu Tokai Paper in 2016, with plans to construct a new mill with Kasuga Paper Industry in 2018. Daio Paper also bought Nisshinbo Holdings' household paper business for 25 billion yen in April, and aims to begin operating a new mill in Ehime Prefecture next year.

## Clariant Receives ISO Certification for New Healthcare Packaging Facility in China

According to the news Switzerland-headquartered Clariant has secured ISO 15378:2011 certifications for its new healthcare packaging manufacturing facility in Dongguan, China. The certification has enabled the facility to produce desiccant packets for healthcare applications. It specifies requirements for current good manufacturing practices (cGMP) and a quality management system (QMS) for primary packaging material manufacturers engaged in the pharmaceuticals sector.



Organizations certified under the standard are required to demonstrate their ability to consistently meet customer needs, including compliance with standards that apply to packaging materials used in pharmaceutical applications.

"Expanding our ISO 15378 certification to our global sites is of paramount importance, as it demonstrates our focus on patient safety and current good manufacturing practices."

The Dongguan site is Clariant's fourth site to achieve ISO 15378 certification after Romorantin, France; Belen, New Mexico, US; and Changshu, China. According to the Clariant healthcare packaging quality head Frédéric Gaire said, Expanding our ISO 15378 certification to our global sites is of paramount importance, as it demonstrates our focus on patient safety and current good manufacturing practices.

"Given the high level of respect this ISO certification has in the pharmaceutical and nutraceutical industries, customers can be confident of Clariant's commitment to quality on a global basis."

Clariant currently manufactures its desiccant packet brands, Sorb-it (silica gel) and Tri-Sorb (molecular sieve), at the Dongguan site for the Asia-Pacific, Americas and European healthcare markets. The company is currently building a new desiccant packet manufacturing facility in Cuddalore, India.

## GLOBAL FLEXIBLE PACKAGING MARKET FORECAST 2017-2024

The global market for flexible packaging material is estimated to grow from \$ 203,707 Million in 2016 to \$ 293,029.6 Million by 2024, at a CAGR of 4.7% between 2017 and 2024. The base year considered for the study is 2016 and the forecast period is between 2017 and 2024. Easy disposal, light weight, and requirement of fewer raw materials are some features of flexible packaging material which are pushing the market growth. The flexible packaging material is approximated to witness significant growth due to its increasing usage in food and beverage industry.

On the basis of raw material, the flexible packaging material is segmented into four segments i.e. paper, aluminum, bioplastics, and plastic. Plastic holds the largest market share almost 80% of the market. Food and beverage sector is the largest user of plastic as they can take various forms and shapes which are essential in this industry. The demand for paper is growing as the production of bags, pouches and tetra packs owing to low cost and the less raw material requirement is on rising. Paper finds its large application usage in food and beverage industry. Good chemical and water resistant properties of aluminum foil are expected to drive the demand of aluminum foil in the market. Bioplastics are estimated to grow at highest CAGR amongst all the raw materials.

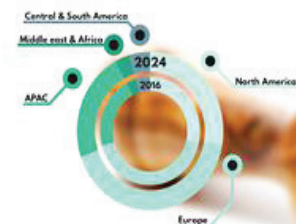
The flexible packaging material is used in various applications and has been classified into four sections on their applications i.e. food and beverages, pharmaceutical, cosmetics, and others. Food and beverage is the largest end-use segment for flexible packaging material and it will continue its dominance during the

forecast period. The increase in demand packaged foods such as instant food, cake mixes, frozen meals and snack foods have led to increasing production of flexible packaging material. The pharmaceutical industry is the second largest end user of flexible packaging material and is growing continuously.

According to the report currently, APAC holds the largest share in global flexible packaging material market accounting for 40% of total market share. Increasing demand for packed food coupled with growing disposable income of consumers is some of the factors which will propel the demand for flexible packaging material over the forecast period. India and China's growth in food and beverages and cosmetic industry are driving the growth of APAC flexible packaging material market. After APAC, Europe is the second largest market for flexible packaging material. The demand for the flexible packaging industry in Europe is fuelled by increasing R&D investments in the pharmaceutical industry.

Rising packaged foods demand, cosmetic industry growth, rapid growth in the global pharmaceutical industry, preference of flexible packing over rigid packaging materials, and reduced carbon footprint are some of the major drivers for the growth of global flexible packaging material market growth. Flexible packaging is mostly used for protecting food from degradation and packaged food demand is on rising with new innovative processing techniques to increase food products shelf life. Changing lifestyle of consumers coupled with increasing demand for environment-friendly packaging material will augment the flexible packaging demand over the next seven years.

### MARKET BY REGION 2016-2024

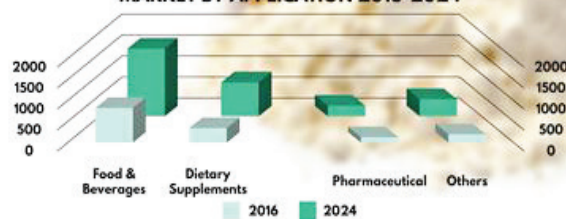


### GLOBAL INULIN MARKET FORECAST (2017-2024)

#### TOP COMPANIES

- CARGILL INCORPORATED •
- BENE-ORAFTI SA •
- OSUCRA GROUPE WARCOING SA •
- JARROW FORMULAS •
- SHANDONG BAOLINGBAO BIOTECHNOLOGY CO. LTD •

### MARKET BY APPLICATION 2016-2024



## Jindal Films Americas Expanding Into Polyester Films

*The new polyester capabilities will be located at the Americas headquarters in LaGrange, GA with a startup expected for 2019.*

According to the Jindal Films Americas (JFA) has announced that the organization has initiated planning activities to expand the product offering to include polyester films.

The new polyester capabilities will be located at the Americas headquarters in LaGrange, GA, USA with a startup expected for early 2019. The planned polyester plant is positioned to have capacity for 65,000 metric tons of film. Preliminary estimates of the investment for this project are \$120 million. The plant would be composed of two lines, enabling Jindal Films to provide a product offering of both thin specialty and thick specialty films.

"We are very excited to introduce the plans to expand our capabilities into polyester film in the Americas," says Marcelo Passos, Executive Vice President and CEO of JFA.

According to the news as JFA initiates the plans to expand into polyester films, Jindal Films Europe is considering a similar expansion in its region. This announcement comes on the heels of the unveiling of the new metalizer in LaGrange, a capability which is part of the previously announced relocation and expansion of the Georgia facilities.

The current expansion project is expected to be completed by first quarter 2018, doubling the current capacity of the Americas division of Jindal Films.

Jindal Films is committed to the flexible packaging and labeling industries.

## European Flexible Packaging Manufacturers Worried About Repetition Of Raw Material Supply Shortage

According to the source Several Flexible Packaging Europe (FPE) member companies, representing about 80% of the total European turnover, have expressed concerns that the critical raw material situation of early 2015 for standard

polymers used for flexible packaging is currently being repeated for another type of plastics: polyamide.

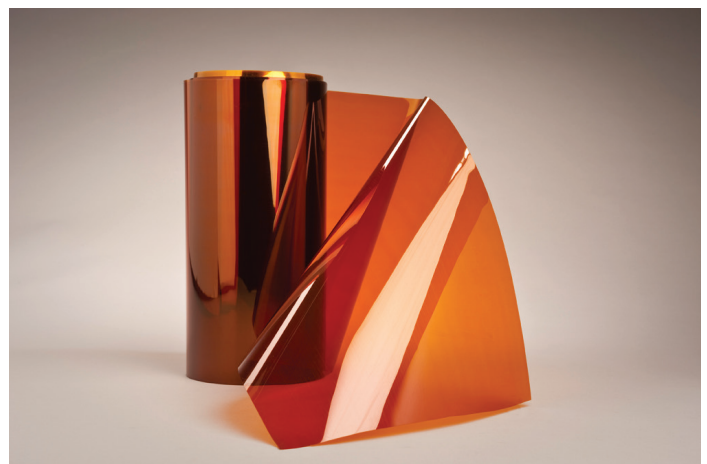
The scarcity of caprolactam (a pre-product for polyamide) in China led to significant exports out of Europe. An recent force majeure announcement for two caprolactam lines will very likely result into force majeure declarations for polyamide itself reducing the limited capacity further.

The increased demand for polyamide in the main applications like automotive will further increases the pressure on the availability for packaging applications in the coming months. In particular, small and medium sized manufacturers of flexible packaging are suffering from this situation. But even the multinational companies are facing difficulties.

The effect on converters means they may have difficulties in supplying finished products to meet their customers order requirements, particularly in the food and beverage sectors. According to the Guido Aufdemkamp, Executive Director of FPE commented on the recent developments: "The current situation of so many announcements to increase margins combined with force majeure declarations is either the test or use of market power. Alternatively, it demonstrates the strong need for maintenance and continuous investment in the European production facilities."

## Flex Films Launches Polyester Film

Flex Film has launched a special polyester film, F-PDP with modified surface on one side while the other side remaining untreated. This film is said to be digitally printable without any need for priming/coating. Company says the film demonstrates good transparency, optical clarity, excellent machinability, and dimensional stability besides offering excellent flatness and agile handling



properties. The polyester (PET) film F-PDP has been certified by Rochester Institute of Technology for digital printing by HP Indigo commercial and sheet-fed presses.

There are a reportedly a multitude of benefits associated with digitally printable PET films, including the following:

- Suitable for short-run jobs, particularly for new launch or re-launch of products;
- Minimizes lead time at the converter's end because no primer/coating is required;
- Gives excellent print results with high quality resolution for pictures and half-tone jobs using primary colors, i.e., C,M,Y,K and white giving results at par with conventional printing even on transparent substrates;
- Option of special colors like gold, silver, etc. can further impart depth in printing.

According to the Anantshree Chaturvedi, Vice Chairman and CEO, Flex Films International, talking about the benefits of digitally printable polyester film, says, "Coating or priming or surface treatment of a film for enhancing its ink adhesion properties is a time-consuming process and there are additional costs involved. Our special F-PDP film is perfect for converters at a time when the entire world is moving toward Just in Time [JIT] deliveries to minimize inventories. Inherent advantages of polyester film include the ability to render excellent print results, and it is tear-proof and crack resistant, making it a suitable and preferred media for digital printing.

Additionally, polyester is able to withstand high temperatures and remains stable and inert to many chemicals further enhancing its suitability for converters."

He adds, "Depending upon the requirements of the ensuing converting process, we can offer F-PDP film in various thicknesses ranging from 10 to 50 microns. The demand for this substrate is quite encouraging across the globe, and as a result, we are manufacturing it at all our facilities, including the US, Mexico, India, UAE, Poland, and Egypt."

## **J.S. McCarthy Printers to Purchase Additional BOBST Equipment**

J.S. McCarthy Printers, headquartered in Augusta, Maine and Bobst North America Inc. of Roseland, NJ has announced the recent signing of an agreement for the purchase of a BOBST SP 104 BM Auto platen Hot Foil

Stamper and Die-Cutter and BOBST VISIONFOLD 110 Specialty Folder-Gluer equipped with HANDYPACK GT.

According to Jon Tardiff, Vice President of Operations, states, "This new equipment will help J.S. McCarthy to meet the growing demand for value added services from the many markets we serve including the Pharmaceutical, Packaging, and Greeting Card industries." Tardiff shares, "BOBST continues to be a great partner for J.S. McCarthy and with this latest purchase the two companies partnered to develop some unique equipment capabilities. These enhancements will help J.S. McCarthy in our ongoing efforts to maximize the productivity of our equipment as well providing us the versatility to meet the unique applications our clients require."



The equipment compliments previous BOBST purchases and reflects the changing print provider marketplace that is looking for added value options for printed products. The equipment is expected to be operational in early August.

## **MDC Doctor Blades Meet Ink - Daetwyler Acquires Rotoflex**

Daetwyler Global Tec Holding has acquired the Rotoflex Group. The Rotoflex Group specializes in the development and production of high quality gravure printing and flexographic printing inks, as well as coatings for flexible packaging foils. Rotoflex operates a production location in Grenchen, Switzerland and a sales company in Moscow, Russia. The company was founded in 1975 and employs approximately 70 staff members.

Rotoflex can benefit from the excellent global network of the Daetwyler Group and its know-how in the printing

industry. The merger creates new sales channels in distribution; new sales and production locations are also planned in the midterm. Together, the companies pursue the goal of becoming the expert partner for high quality printing products.

## Pak Packages Lahore Invests In Bobst K4000 Metallizer

Pak Packages, Lahore one of the largest and most innovative flexible packaging company, installs BOBST K4000 metallizer. The highly versatile machine can produce barrier and decorative coatings as well as selectively metallize in-line and in-register.

According to the news Pak Packages strive for excellence, strong relationship between company and stakeholders, and continuous technological advances give the company strength and competitive edge to retain its position as the market leader. It has more than 25 years of reputation of providing excellent products and services to customers in the consumer food and non-food industries.

## BOSCH Packaging Launches Improved Version Of Presto D3 Toploading Collator

The new Presto D3 machine range is said to be equipped with jam prevention and others for non-stop operation. It is also claimed to have improved versatility for fast and tool-less format change. Bosch says that the machine range has been designed for picking, placing and collating a broad range of food and non-food wrapped products. On the other hand, its robotic platform which has been upgraded helps manufacturers achieve the highest flexibility owing to its modular design.



According to Bosch, the Presto D3 machine range which comes with different configurations has been designed to address the growing need of customers for increased productivity and flexibility. The top loading collator range is also said to be adaptable to various factory and production layouts.

Bosch Packaging Technology robotic portfolio sales director Marc de Vries said: “The new jam-prevention feature on our proven Presto platform is designed to improve the ease of machine operation and at the same time, increase the uptime and efficiency of this type of machine.

“With this customer-focused technology, we underline our commitment to helping enhance their efficiencies and reducing their TCO.”

According to the news due to the easy integration with upstream and downstream packaging equipment requirements, the solution comes with one or two infeed conveyors, stated Bosch. This, it says enables the products to be picked up, grouped and placed flat or on edge into cartons or the infeed chain of a side load cartoner directly.

The modular design of Presto D3 top loading collator facilitates handling of multiple product and carton types and sizes on the same machine as per its manufacturer. Operators without having to use actual products can design simulations of new formats by using the Human Machine Interface (HMI) and Gemini 4.0 controller of the machine and thus saving on production time.

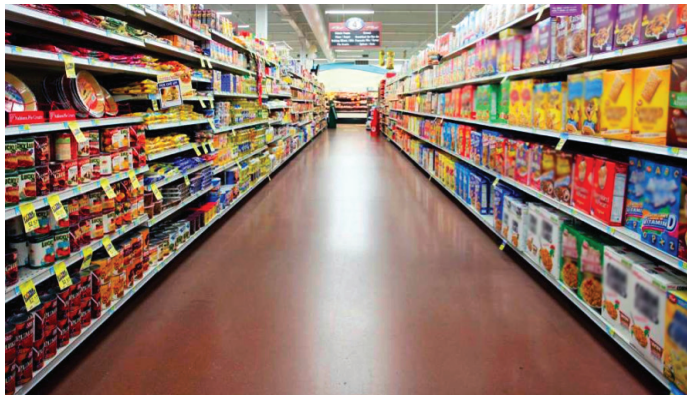
## Folienprint Installs Two BOBST 20six Flexo Presses

Folienprint, a company specialized in the printing and finishing of flexible materials that forms part of the RAKO Group and has its head office in Gallin, installs two new type “20SIX” central cylinder printing machines from BOBST. The new 10-colour machines have a web width of 1,100 mm and a maximum repeat length of 800 mm at a maximum production speed of 400 m/min. Both machines boast the smart GPS graphics positioning system and Low Energy Operation (LEO) system. Smart GPS reduces the number of positioning and register errors while the LEO (Low Energy Operation) system cuts energy.

## Opportunities and Challenges in Digital Printing for Packaging

Digital printing for packaging has transformed itself in the last decade from a niche application to the accepted standard for packaging converters and brand owners. Digitally printed packaging can now enable innovative marketing and engagement, get products to market faster, boost customer loyalty, and most importantly, increase profits. For 2017 onward, a new paradigm has emerged - high-quality packaging that utilizes a variety of formats, substrates and inks on digital presses. The challenge, however, will be how 'conventional' commercial printers can add this technology to their shops cost-efficiently. For those not familiar with this market or its challenges, here's some background.

According to research digital packaging and label printing worldwide was valued at \$10.5 billion in 2015 - and the digital print for packaging market will grow by an average CAGR of 13.6% in constant value (real) terms to 2020, with a print volume CAGR of 16.2% globally. But this is changing as new digital equipment to print on cartons, corrugated, flexible, rigid plastics and metals is being introduced. Despite this projected growth, digitally printed output currently only makes up a small percent of packaging. Just 5% of labels are now printed digitally and less than 1% of all other packaging is printed digitally! Yes, digital printing has had a much slower adoption compared to commercial and document printing. But make no mistake - this technology can still be a key revenue producer in the years to come.



Right now, players in this space are making money in two different ways. The 'older' way is by developing new markets. But what's happening now is that the new digital packaging and label presses are providing production relief. They're able to take complicated jobs off of a conventional offset press and put them on a digital press where they can be run much more effectively - and profitably! And their sizes can vary from large packaging presses to compact, desktop label color printers. At the same time, new workflows specifically for labels and packaging are also streamlining production and reducing downtime.

But the packaging industry can be more difficult for other reasons. First, it's subject to a larger range of substrates that tend to be more challenging to print on - such as clear films that require white-ink printing. Second, it's heavily divided into many sub-segments. This can make packaging more problematic, because even with conventional printing, no one type of press can likely handle all the applications. Third, the markets for packaging are extremely diverse. The four main categories labels, flexible packaging, corrugated and folding cartons, can be divided even further into sub-categories. Again, it's a very intricate mix of different types of packaging with different requirements that no single press (even an offset press or a flexo press) may be able to accommodate.

In the future, we believe that the key to getting digital package printing mainstream will vary by application. For example, in the corrugated market, there are multiple single-pass digital printing options on the horizon. At the moment, corrugated digital printing is primarily relegated to specialty applications, due to the need for the print head to scan the substrate multiple times. But single-pass printing will be the big hurdle. Once OEMs can overcome that, printers in this space will be able to take advantage of production speeds. Digital printing will face similar obstacles in the folding carton market. Everyone wants to get to production-length folding cartons. They want to be able to print 5,000 or more quality cartons efficiently and make money printing them on a digital press as well as make every carton different by putting variable-data on it or using QR codes.

The conventional offset printers of today can seize opportunities that will be available in the expanding market of digital packaging printing. If I were a printer today, I'd do my homework first. I'd explore the capabilities of the new digital packaging and label-printing presses and workflows, know the challenges of printing on previously unfamiliar substrates with new inks, see if special operator training is required, and above all, assess my current opportunities for expansion before I'd invest. It might be prudent to start out with smaller label printers in-house. Then, if you see an opportunity for expansion into packaging, check out the larger packaging presses.

## IPAP Tehran 2017: Messe Düsseldorf extends International Portfolio *Partnership with IPAP Tehran - Iran's Printing and Packaging Industry Exhibition Agreed*



Messe Düsseldorf, the successful organizer of leading international trade fairs for the printing and packaging industries, extends its portfolio to include a promising event in the Middle East: IPAP Tehran powered by drupa will be held for the first time from 12 to 15 October 2017 at Iran's most modern exhibition Centre: Shahr-e-Aftab (Exhibiran International). Staged in cooperation with the Iranian organizer BRP, the trade fair targets all suppliers along the entire value chain for printing technologies from the segments of Prepress/Print, Premedia/ Multichannel, Postpress, Converting and Packaging, Materials, Equipment, Services, Infrastructure. Other trade fairs held concurrently are pacprocess Tehran and iFood Expo.

Iran has been an extremely attractive market since the international sanctions were eased in early 2016 because its economy faces backlog demand in every area. An emerging region with some 80 million inhabitants experts expect 12% economic growth by late 2017 alone, projects with foreign investment worth a 3digit billion amount are in the pipeline. Even though the local printing industry is quite well developed by comparison with many other markets in the near and Middle East, it has now come under high pressure to invest. This opens up huge opportunities especially for European suppliers because their products have

“Counting over 32,000 offset print shops, to the tune of 50,000 digital print service providers and some 65,000 other upstream suppliers to the printing industry the Iranian market holds attractive

potential for further business development. IPAP - Iran's printing and Packaging Industry Exhibition is a well-established trade fair already, which until now was held in Mashhad. Moving to Tehran and cooperating with drupa - the no.1 for printing technologies opens up new opportunities for growth and greater international reach,” says Sabine Geldermann, Global Head of Print Technologies at Messe Düsseldorf.

Shahr-e-Aftab (Exhibiran International) is Iran's latest and biggest exhibition Centre. Favorably located between Tehran City and the international airport with access to several motorways and also with connections to public transport, it fuses a capacity of 120,000 square meters in 16 exhibition

halls with the latest technical equipment with traditional Persian landscaping as well as comprehensive services such as food service, hotels, banks and multi-story car parks. The central location also allows visitors from such neighboring states

as Iraq, Afghanistan, Turkmenistan and Tajikistan, which have traditionally maintained close commercial ties with Iran, to visit the exhibition Centre. This fact, of course, also benefits the exhibitors at IPAP Tehran for whom business opportunities also open up in those countries.

Also forming part of IPAP Tehran is pacprocess Tehran, which targets companies from the packaging sector and related processing industries. pacprocess Tehran is an integral part of Messe Düsseldorf's interpack alliance.



## Messe Düsseldorf Presents A Fresh New Face

Work continues on one of the most ambitious construction projects in the history of Messe Düsseldorf: By the summer of 2019, the company will have completed a new multifunctional hall with conference rooms and a new fully glazed South Entrance with a translucent illuminated canopy and adjacent underground car park. This will create one of the most modern trade fair and event locations in the southern section of the Messe Düsseldorf trade fair site, a venue that meets the highest standards in architectural and functional terms. The investment volume for this southern section is EUR 140 million. The K trade show, the world's leading exhibition for the plastics and rubber industry, will once again fill the entire Messe Düsseldorf site from 16 to 23 October 2019 and also use the new Hall 1 and entrance area.

“We regard this construction project as an important step towards the complete modernization and renewal of our venue. It allows us to adapt it to the demands and requirements of customers and, additionally, further enhance the service factor”, enthuses Werner Dornscheidt, Chairman of Messe Düsseldorf. “And, as usual, the whole project is being completed without subsidies.”

### One of the most modern trade fair and event locations

Following the northern expansion of the Messe site in 2004, Helmut Oberholz, Managing Partner of Slapa Oberholz Pszczulny, the team of architects commissioned with this project, is proud to be entrusted with the New South Entrance development. “We're delighted at this opportunity to contribute so significantly to the unique urban development between the Rhine and Nordpark with an address that overlooks this city and is so clearly visible from afar.”

Trade fair and congress visitors are greeted by this impressive canopy, a structure that simultaneously accommodates taxi ranks, public transport stops and the entrance to the underground car park. After entering, trade fair visitors can continue from here through the entrance portal into the lofty foyer, 16.5 meters high and with a 82-metre wide glass front that opens onto the forecourt and can also be used as an event location. An exciting spatial structure is created by means of cantilevered glass conference halls that project from the first floor into the entrance hall, itself a design suggestive of an atrium. Ample space is also provided here in an area exceeding 2,000m<sup>2</sup> for essential services such as cash desks and cloakrooms.

The South Entrance leads directly into Hall 1. With a length of 158 meters, a width of 77 meters and a cantilevered area exceeding 12,000m<sup>2</sup>, it is more or less equivalent to Halls 8 a and b and provides around 550m<sup>2</sup> more space than both the old Halls 1 and 2. Both technically and in terms of the flexible utilization options it offers, the new hall meets the highest demands of exhibitors and visitors and matches the exacting standards of the entire trade fair site. The new conference area is located on the first floor of the hall, offering six conference rooms, which can be flexibly divided to suit different utilization conditions and adapted in terms of their size.

### Messe Düsseldorf 2030: The future strategy

In addition to energy-efficient building technology, flexible utilization options and connected congress facilities are among the most important requirements a contemporary and sustainable trade fair venue needs to meet. Messe Düsseldorf has reacted in a timely manner to these developments and, in addition to the international Messe Düsseldorf 2030 strategy which focuses on expansion of the global portfolio and strengthening of international sales in the concept of business activities, has also developed a master plan for the modernization of the trade fair site.



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## RFID in Packaging to Improve Safety and Interaction

If only life is better with changes then adoption of change is a necessary action to consider even if it is the protector of many things, packaging. Driven by ever new-life-getting technology, packaging now-a-days has become a face for smart things through incorporating latest technologies and trends. Do you ever think a pack in your hand can help you interact with the brand owner of the product to get information? Or can anyone assume a food container that cares like your mom and makes your hands off from container after finding food in the box got spoiled? Well, these kinds of innovative packaging inventions will become our everyday fun with the packaging called interactive or smart packaging integrated with RFID tags. The usage of RFID tags in packaging opens new avenues for greater safety, convenience and quality while moving with a mission to offer necessary information to consumers in the right moment.

Keeping consumers' safety as the primary factor eAgile, a popular RFID systems provider has recently unveiled an integrated tag called 'DualWing' which astonishingly incorporated two frequencies UHF and NFC in it. In contrast to conventional applications, which may use either UHF or NFC frequency relying on the purpose, DualWing uses both the frequencies to bring up supply chain and consumer engagement option in a single integrated tag.

DualWing provides an interactive packaging solution that can forge an interaction between a consumer and a brand owner. For instance, if you're in a drug store and finding difficulty to choose a medicine from many products racked up in the store, you can simply connect to the brand owner and get information with the help of DualWing employed package and an NFC enabled smart phone by tapping phone over the product package. Once tapped, you'll be connected to the brand owner immediately and can access information like expiry date of the drug,

dosage amount to be taken, does it had been into any recall, is the product authentic, does it have any side effects etc.

RFID technology that is set to provide information about drugs is also in the forefront to guide food lovers when they choose food packages. A Northern Europe based research organization, VTT Technical Research Centre of Finland had researched and developed an RFID based system that can detect and alert people about ethanol formed due to food spoilage. With this, consumers can stay in a safe zone by receiving information from the wireless sensor that is able to detect the condition of food in a package.



According to the researchers combined a wireless sensor that can find the spoilage in chopped fresh fruits with a printable RF tag and arranged it underneath the package label. If there is any formation of ethanol in food package, the sensor senses and sends information to consumer which can be accessed through near field communication (NFC) enabled smart phone. The data is sent via a reader, it can also be used from a remote server which stored it digitally, with the help of a smart phone.



## EASTLAND INDUSTRIES CORPORATION (PVT) LTD.

### Head Office:

B-60, Manghopir Road, S.I.T.E.,  
Karachi (Pakistan).  
Phones: +92 21 32581073-74  
Fax: +92 21 32572385  
Email: [info@eastlandind.com](mailto:info@eastlandind.com)

### Lahore Office:

88-A, Sundar Industrial State  
Raiwind Road, Punjab (Pakistan).  
Phones: +92 42 35297211-12  
Email: [info@eastlandlhr.com](mailto:info@eastlandlhr.com)

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## WHERE YOU CAN FIND US

### HEAD OFFICE

Office No.6, 5th Floor, Tele Tower,  
Link Road, Model Town, Lahore.  
Landline: (042) 35447360  
Cell: (0333) 2630775  
Email: info@smschemicals.com  
Website: www.smschemicals.com

### KARACHI SALES OFFICE

Rotopack  
Office No.7, Plot No.E2, Rukhsana Building,  
Shaheed-e-Millat Road, Karachi.

### WAREHOUSE ADDRESS

H6, State Avenue, S.I.T.E,  
Karachi.

Landline: (021) 34550563-64

Email: sales@rotopack.com.pk  
rm@rotopack.com.pk  
Website: www.rotopack.com.pk

### LAHORE SALES OFFICE

Nadeem Chemicals  
Bund Road, Lahore.  
Landline: (042) 37158785  
Email: aliraza63535@hotmail.com

### FAISALABAD SALES OFFICE

Rotopack  
Office No.7, Plot No.E2, Rukhsana Building,  
Shaheed-e-Millat Road, Karachi.  
WAREHOUSE ADDRESS  
Railway Mall, Faisalabad.  
Landline: (021) 34550563-64  
Email: sales@rotopack.com.pk  
rm@rotopack.com.pk

### MULTAN SALES OFFICE

Prestine Chemical Traders  
579/E, Shahrukn-e-Alam Colony, Multan.  
Email: pristine.ichem@gmail.com  
Landline: (061) 6776169  
Cell: 92(300) 4534477  
92(300) 4534488  
92(300) 4534499

### SALES TEAM CONTACT INFORMATION

Aftab Alam: (321) 8700424  
Uzair Khalid: (321) 8700434  
Yahya Ali: (321) 8700444  
Kasheer Khan: (321) 8700484

*...We are committed to provide quality inputs to Industrial entity of Pakistan...*



*An Exclusive Interview With:*

**Mr. Aamer Khanzada**

**Managing Director,**

**Pegasus Consultancy (Pvt.) Ltd.**

**Packaging Pakistan: Pegasus Consultancy is considered to be the pioneer of professional B2B exhibitions in Pakistan? How it all started?**

Pegasus Consultancy was incorporated in 1999. The main objective was to organize international exhibitions/conferences in Pakistan where buyer, supplier & industry professionals could converge & interact directly with each other to prospect identify & target their respective needs as per current industry trends. Our first breakthrough event was defense exhibition IDEAS 2000. We organized first 4 events of IDEAS collaborating with DEFENCE EXPORT PROMOTION ORGANIZATION. In the meantime, we joined hands with TDAP to launch EXPO PAKISTAN 2005. First 5 exhibitions were organized by Pegasus. Apart from this, Pegasus launched its own B2B events on textile, automotive, oil & gas, machine tool, fire & security, plastics & packaging and food technologies. "POSITIONING WITH DIFFERENTIATION" is what Pegasus believes in and that is what kept us well known for our experience, professionalism, creativity & dynamism.

**Packaging Pakistan: How do you see Plasti&Pack and Iftech Pakistan exhibitions progressed over the years?**

Plasti&Pack and IFTECH is the most comprehensive and integrated B2B exhibition marketplace through

which, innovative global initiatives have been introduced and latest technology trends have been displayed in Pakistan. We are proud of the fact that these exhibitions are servicing the integral sectors of plastics, printing, packaging & food processing industry since 15 successive years. Plasti&Pack and IFTECH are now considered as the biggest annual gathering of industry professionals, brand owners, buyers and suppliers in Pakistan.

**Packaging Pakistan: How important is the participation of International companies in local events & how we can attract more and more companies to come to Pakistan to attend exhibitions?**

International companies bring their technology as well as their knowledge and vast experience of working in different regions which is an important know how for our local industry. Pegasus Consultancy enjoys long term linkages with leading trade fair organizers, trade bodies and network of agents. Moreover, highly experienced sales team meet potential prospects in various international exhibitions every year. Based on this, Pegasus has developed a broad based database through which we keep connected to our international clientele all over the year. Pakistan is an emerging economy with growing demand of diversifying manufacturing, processing and packaging needs in plastics and food packaging therefore international exposure and interaction is very necessary. Having international companies at our doorstep is an affordable solution. We are playing our part and we hope government will take all necessary steps to offer ease of business for international companies in Pakistan.

**Packaging Pakistan: How do you see the competencies of local plastics and packaging companies improving especially local packaging machine manufacturers?**

Local machine manufacturers especially in packaging are a dominant factor in Pakistan moreover; a few are successfully exporting their machines to neighboring countries and in Africa. I am also quite optimistic about flexible packaging industry. This sector is steadily growing and I believe our packaging companies have the potential to become important players in this region; improved local competences can open doors of global opportunities. In this context, Pegasus is always ready to extend its cooperation to the stakeholders of flexible packaging industry.

**Packaging Pakistan: What is your analysis of international & local converting industries?**

I cannot comment about international but our converters are serving the industry well which is an important thing. They are continuously improving their services, they are adopting new trends. Notable thing is Pakistan's converting industry is open to experiment with new ideas and innovations which adds to the overall dynamism of this industry. Since the converters of Pakistan are converging on a single platform of FLEXPAC. I hope this initiative will create a collective sense of moving forward towards progress and long term prosperity.

**Packaging Pakistan: What are the effective measures the event organizers should take to organize a successful event?**

Exhibition is an industry and this industry is a complex business which cannot function without teamwork & the lifeline of this teamwork is professionalism, experience, working expertise, knowledge, connections & an untiring will to succeed of likeminded people.

**Packaging Pakistan: Exhibitions are considered as an export marketing tool. What is the role of trade bodies and government in its efficient use?**

International trade bodies, associations and companies closely observe how an event is backed up by government and local trade associations

therefore it is imperative to have this kind of support from our government and related association for an exhibition on specific industry. Improved facilities on expo centers, encouraging tax subsidies on B2B shows and high level subsidy exchange program with Europe and China can bring a positive change in exhibition business.

**Packaging Pakistan: How Pegasus & Flexpac association can do combined efforts to bring the local converting industry on international radar?**

Pegasus has supported FLEXPAC from its very beginning & we are open to discuss every possibility which can help in positive growth like seminars, industry meetups, knowledge share sessions and delegation visits to international trade shows etc.

**Packaging Pakistan: Please tell us about your future plans in exhibitions and conferences organization?**

Our core business is B2B exhibitions & conferences which we will continue doing. Our main objective is to highlight the trade potential of Pakistan through B2B events. We are doing exhibitions on all major industries & we will continue to find new avenues of bringing more & more industries on the forefront of global trade.

*"Next Plasti&Pack show will be held on 2nd -4th August, 2018 Expo Center Lahore"*



## PLASTI&PACK PAKISTAN

### 15th Edition of the International Plastics & Packaging Industry Trade Fair

*August 2017 KARACHI EXPO CENTER*

Plasti&Pack Pakistan is celebrating its 15th successive edition in 2017 which promises a strong technology demonstration from the leading local & international suppliers of plastics & packaging trade. Plasti&Pack 2017 is ideally set to host 400 + exhibiting companies from more than 30 countries including Austria, Belgium, China, Denmark, France, Germany, Hong Kong, Iran, Italy, Korea, Malaysia, Netherlands, Poland, Singapore, Spain, Sweden, Taiwan, Turkey, UAE, United Kingdom and United States of America.

The exhibit profile of Plasti&Pack includes latest technology display of Master batches, raw materials & petrochemicals, injection & blow molding, pipes & packaging film extrusion technology, filling, sealing, capping & other packaging machines & materials, PET resin & PET products, disposable packaging, paper & paper converting, labeling & printing technology, flexible packaging, packing machines, testing & analytical instruments etc.

For the record, it is important to mention that in 2016, raw material worth 1.3 billion \$ was imported in Pakistan. Plastic machinery & printing packaging machinery and parts import was 273 million \$ for the same year. There are more than 6,500 manufacturing units are there in Pakistan in which 7 are upstream, 700 are downstream and 600 to 700 are medium size units. Mr. Jawed Butt, Senior Vice Chairman, stated

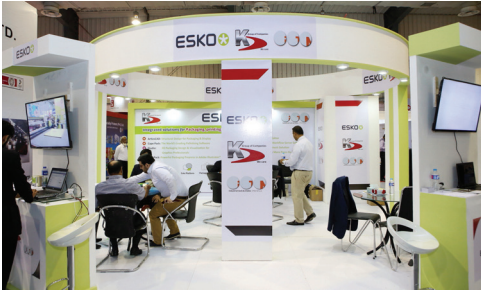
that, I am very happy to see the extraordinary number of international exhibitors at this time in Karachi exhibition its confirms the increasing interest of international business professional in Pakistan he also said that everybody in the industry is convinced that professionally structured trade exhibitions play a major role in increasing the trade activities by providing exclusive chances for interacting and emerging new associates. On behalf of FLEXPAC I congratulate Pegasus Consultancy for organizing remarkable event in specialized way.

Plasti&Pack Pakistan 2017 is supported by Board of Investment Pakistan (BOI) Engineering Development board of Pakistan (EDB) Flexible Packaging Association of Converters of Pakistan (FLEXPAC) and PCMA. Leading Flexpack member companies Toyo Packaging, Transworld Multipurpose Industries, Al-Amna Packaging, K-Group of Companies, Macpac Films, Kashif Trading (Hi-Tech Inks Pakistan), Specialty Printers and Trade Polymerz were especially notable among foreign participation along with several other big companies.

14th Edition of IFTECH FOOD + BEV TEC 2017 will concurrently take place with Plasti&Pack Pakistan2017 together; these events are the largest gathering of plastics, packaging and food technology suppliers, buyers and industry professionals in Pakistan.



# PICTURE GALLERY



## Screw Cap Printing Just One Way to Use Print Solutions to Optimum Effect

When it comes to designing your product, branding and look is everything. People will often develop a relationship with a company's design that inspires them to keep reordering the same products again and again. When it comes to choosing a bottle, the shape and function are extremely important. Your packaging must look good and be the right shape for your product. If you are selling liquid soap, you want a foamer pump that makes sense. Likewise you may have produced a truly spectacular shampoo. Regardless of the high quality of your shampoo, you will need a shampoo dispenser that works and looks good.

### Personalizing Your Cap Reinforces Your Brand

Part of choosing the right container for your product is evaluating how the cap works. If you are using a screw cap, you may want to print your logo or colors on it to make it a uniform part of your product. There are many types of caps that can be used to seal your product as well and you want to make sure you are choosing the best fit for your customers and your branding. Whether you're using a screw cap, a regular plastic cap or dome cap, you will want to personalize it in some way in order to link it to your brand.



*An example of flexographic printing applied to bottle caps.*

### Laser Coding is an Ideal Process for a Screw Cap

There are various methods that can be used to print on a screw cap. Laser coding is one method that is very effective. It has the flexibility to integrate well into product lines which will give you a smoother look. It's very useful for products that may be exposed to water, sugars and potential other chemicals as well. In this way it is an option that offers a lot of reliability and protection.

### The Protection of Continuous Inkjet Printing

Continuous inkjet printing is another option that offers even more protection against water, creams, and sugars. It actually offers the most protection of the options discussed here. There are a lot of inks available so that you have a wide range of choices for creating your look. It is also a high speed option, capable of handling short runs and lots of changes.



*Laser coding provides a simple way to print onto a screw cap.*

### Flexographic Printing Offers Vibrant Brilliance

Flexographic printing is another option that gives you a very high quality print job. There are a wide variety of inks to suit the needs of almost any product, including weather resistance, chemical compatibility and scratch and abrasion resistance. This option also offers high color strength and brilliance so if this is important to you it is definitely worth checking out.

As you can see, all of these methods have multiple benefits. It's worth discussing your product with an expert so that you can be sure that you're getting the best option for your specific and unique needs. You may want to consider whether the product will get wet or may be likely to get on the cap after continued use. Are there chemicals in your product that could harm the printing? Is color important to your product and branding? Answering these questions will help to eliminate issues that could arise later down the track. Then, it's easy to choose the print job that will fulfill your highest ambitions.

## Unique Issues of Laminating Inks

One of the major advances in flexible packaging was the introduction of film laminated structures.

Film lamination allowed different properties to be combined in various structures to provide unique packaging protection. Lamination could be done through adhesives, heat-sealable coatings, or extrusion lamination.

In such laminated structures, the printing could be "buried" in the package. In this way unique products could be created that provide high quality graphics with functional packaging characteristics. Moisture and oxygen barrier plus package protection could be designed into the construction.

Laminating inks suitable for these structures evolved as ink suppliers met the requirements of new films.



Solvent-based inks were the first laminating inks developed and continue to dominate the flexible packaging industry. Today, water-based inks are being used on a variety of packaging structures. Laminating inks typically are printed on the backside of a film and then "laminated" to another film

through the use of either an adhesive, a thermally heat-sealable coating on the film, or by molten PE applied to one film and then pressed to another.

In the case of adhesives, the inks are exposed to the drying temperatures of the adhesive, the temperature of the heat seal coating, or the extrusion temperature of PE. Extrusion lamination creates the highest-temperature exposure to laminating inks.

Typically, once extrusion lamination is applied, the process involves cooling the web quickly and stabilizing the film dimensionally.

The first criterion of a good laminating ink is that it will have good adhesion to the substrate. Special resins are chosen that have excellent ink adhesion and maintain this bond through the laminating process. These resins not only require good adhesion to the substrate but must have high cohesion characteristics to provide high packaging integrity and high performance bond values.

All the ingredients of a laminating ink are chosen carefully to assure the laminated product is free from undesirable odors. The primary source of odors in solvent laminating inks has been the residual solvents that can be trapped within the laminated structure. Water-based laminating inks have very low or no solvents at all, but they can contain amines as well as residual monomers that can contribute to odor.

Odors associated with laminated packages can be due to residual solvent retained in the laminated structure, or less commonly, to secondary sources. Secondary sources include resin decomposition or post reactions within the laminated structure. Such unusual reactions are complicated and can involve other ingredients, such as certain pigments that can catalyze oxidation of some resins.

Corona treatment of films is a common method of increasing the surface tension of a film to improve the ink adhesion. In some cases, excessive corona treatment can oxidize and decompose film ingredients, such as anti-oxidants or anti-stats. Such oxidation and decomposition also can lead to discoloration and produce off-odor side products. Unlike surface printing inks, laminating inks do not contain waxes or other lubricants, as they will lower

laminated bond values. In addition, the inks do not have to be high gloss since they are reverse printed, and the film substrate provides excellent gloss and surface protection. Laminating inks do not require the same product resistance as they are “sandwiched” in a protective structure.

Laminating inks can contain other ingredients, such as cross-linking adhesion promoters. These are used to maintain high bond values but occasionally can be problematic, as some adhesion promoters can create discoloration and odor problems from their chemical reactivity.

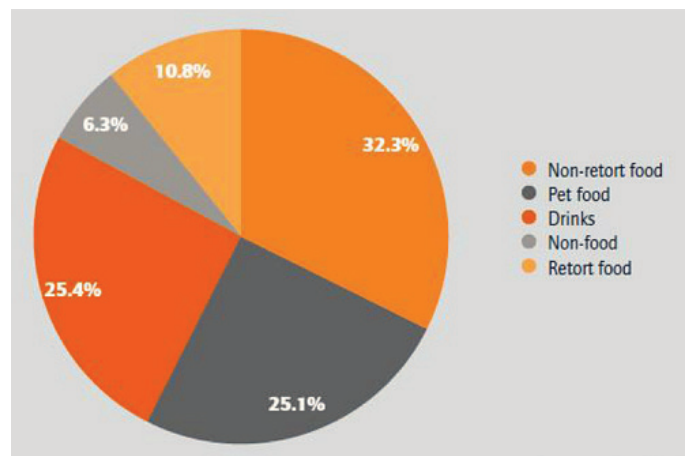
Today's laminating inks provide excellent performance and reliability, thanks to the R&D conducted by domestic and international ink companies. Challenges ahead include digital and UV-curable laminating inks. The primary issues connected with UV laminating inks for flexible packaging applications are low odor and suitability for food packaging.

Laminating inks have had a long evolutionary history. As new film substrates are introduced, new performance demands arise. Water-based and solvent-based laminating inks have been developed for many applications, but they continue to evolve in pursuit of higher quality and performance.

## High Hopes for High Demand in High-Barrier Pouches

Have you noticed the many new types of packaging that you are seeing in your last visit to the supermarket? While it may be difficult to differentiate the packaging that is digitally printed from conventional methods, with breakthroughs in material science, there are increasingly new types of packaging making to the shelves that are much easier to distinguish. For example, according to the Smithers Pira report, *The Future of High Barrier Pouches to 2020*, global high-barrier pouch packaging totals approximately 49 billion units and consumed 319,000 tons of polymer materials in 2015. Global high-barrier pouch consumption is forecast to grow at a compound annual growth rate (CAGR) of 6.1% to 2020, reaching 69 billion units

and a market value of almost \$3.0 billion.



All flexible packaging films have some level of permeability to oxygen, carbon dioxide, and water vapor. It is rarely economical to use a single film as a barrier because of the large wall thickness and higher cost that would be required. Where a barrier is required, multilayer film structures are commonly used. They typically incorporate a base film which itself could provide some barrier protection and either a higher barrier polymer or a barrier coating.

There is rapidly increasing demand for packaging materials that give even greater protection to their contents. This is especially noticeable in the food, beverage and pharmaceutical industries. As plastics have become more and more common, concerns have arisen about their ability to allow the exchange of gases and vapors that can compromise the quality and safety of packaged products.

### Food Applications Dominated Global Use of High-Barrier Pouches

High-barrier pouch demand is being driven by several factors including the ability to incorporate value-added features such as resalable zippers and sliders, spouts and handles. Technology improvements such as faster machinery speeds and reduced heating times in retort applications are also playing a role. Finally, there are ongoing improvements in materials such as higher barrier film substrates and coatings with increased heat tolerance and strength.

## Food Packaging Opportunities

Food markets (retort and non-retort) are forecast to show the highest growth rates during the period 2015-20 for high-barrier pouches. Retort pouches undergo a sterilization process that gives their contents an extended shelf life. Non-retort pouches are for food items that do not require sterilization. Non-food markets are expected to develop from a low base level, with drinks and pet food markets growing at the slowest pace.

Non-retort food pouch applications includes fresh and processed meat, dried food, breakfast cereals, snack food and confectionery, dairy products, baby food, powdered instant drinks, hot drinks, fruit compote, ketchup and mayonnaise. Non-retort food markets for high-barrier pouches have been established for a longer period of time than retort high-barrier pouches. Non-retort high-barrier pouches are nevertheless predicted to grow during the forecast period at a rate above the high-barrier pouches market average rate. Fresh and processed meat, snack food and confectionery and dairy products offer good growth potential for non-retort high-barrier pouches.

## New Applications

Juice drinks is the largest area of application for high-barrier pouches in the beverages category, followed by wine. The highest growth has been in fruit compotes and frozen alcoholic cocktails. There has been a slower than expected uptake in flexible pouches by soft drinks producers over the five-year period to 2016. Beverage producers believe it is difficult to convey a premium image with a pouch container that is becoming ubiquitous across many different product categories. Wine is now available in flexible pouches often employing a barrier coating and bag-in-box packs. Single-serve wine demand is growing and pouches offer a light, portable and convenient solution, quality, ease of use and environmentally friendly packaging.

## Stand-up Pouches

Stand-up pouches also possess advantages that enable them to replace conventional packaging such as glass bottles and metal tins. The advantages that are often claimed for barrier pouch packaging

solutions over traditional packaging include reduced retort and sterilization time; energy savings; better preservation of taste and nutrition; lightweight packaging material; economical transport; strength and durability; and better shelf appeal.

In addition, stand-up pouches generally have a superior carbon footprint compared with rigid plastics when the complete supply chain is taken into account. Stand-up pouches also provide all-round graphics and consist of only one packaging component.

## Growth in Asia-Pacific

North America is the largest regional market for high-barrier pouch packaging with a 2014 volume share of 31.9%, followed by Asia Pacific with 27.1%. The high share of the Asia Pacific region is mainly attributable to the well-established Japanese high-barrier pouch packaging market. Compared to Japan, the rest of Asia Pacific is less advanced in terms of high-barrier pouch packaging demand, but is growing at a faster rate.

The North American and European retort packaging markets have been slower to develop than in Japan due to competition from the well-established frozen and canned product industries.

In Japan, where these industries were smaller, the development of the retort pouches has been stronger. Furthermore, the widespread adoption of the microwave oven and ever-increasing time pressure on consumers are stimulating demand for convenient microwavable ready meals in pouches.

While there is overall growth expected in the high-barrier pouches market in 2015-20, the more mature markets of Western Europe, North America and Japan are forecast to grow sales at less than global market average rates during the forecast period.

Asia Pacific countries such as China and India, as well as South and Central America and Turkey, are forecast to grow sales at higher than market average rates. Eastern European demand for high-barrier pouches, on the other hand, is likely to be restrained by a sharp slowdown in the Russian economy.

## Solvent Retention in Packaging

Solvent-based gravure and flexo inks used in packaging always retain small amounts of solvent in the final package. When measured and controlled, this is not a problem. However, excess solvent retention will cause the package to have an odor and can spoil the taste of food products.

The human senses of taste and smell are very acute, and residual levels of solvent in the 1-100 parts per million (ppm) ranges often can be detected readily and found objectionable. Even though there is always a physical barrier between the ink or other coating and the packaged product, the residual solvents can migrate partially into the product headspace or into the product itself.



Having established that solvent retains can be a problem, it is necessary to employ quality measures to guide manufacturing operations. Over the years, the major consumer product companies have come up with limits on acceptable solvent retention. This standard will have an overall upper cumulative limit for all detected solvents. It also would have limits within this total for individual solvents. Each individual solvent would have a limit based on its tendency to be an odor or taste offender. The limit for ethyl acetate, for example, may be one-tenth of that for ethyl alcohol. The specifications vary by Consumer Company, the product being packaged, and the package construction. It is based on what is found acceptable in each instance. This level of acceptability is first established by experienced taste and odor panels, which are run in parallel with gas chromatography (GC) readings to quantify the retention levels of the various solvents. Product supplied by the converter then must fall within these specifications.

The table below is an example showing some typical GC reading numbers for a flexo lamination print. Sample and specification readings are shown in two commonly used units. These are milligrams per ream

(3,000 sq ft) and milligrams per square meter. The ppm numbers for the retained solvent are calculated from the basis weight of the substrate or finished construction. In the converting operation, samples are taken at the startup to confirm the press setup is capable of producing acceptable GC readings. This normally is not an issue since the press settings would have been established on a qualifying run. In practice, many problems can occur and for many different reasons. Here are some examples:

Solvent	Spec mg/rm	Sample mg/rm	Spec mg/m <sup>2</sup>	Sample mg/m <sup>2</sup>
Ethyl Acetate	20	139	0.7	0.5
Methyl Ethyl Ketone	100	56	0.4	0.2
Ethyl Alcohol	1,500	836	5.4	3.0
Toluene	100	56	0.4	0.2
Total	1,900	1,087	6.9	3.9

- The most obvious problems come from changes on the press, such as line speed and dryer settings, or a change of reducing solvent in the ink or coating. Any and all of these adjustments may have been made to correct a print issue.
- Rotogravure print generally has higher retains due to thicker ink films requiring more solvent to be removed.
- A design change in which more ink coverage, heavier ink laydown, and more colors are used will result in higher retains. It should be noted that retained solvent increases exponentially with any of these design changes.
- Use of metallic inks can cause higher retains since thicker ink films are required, and the metallic platelets in the ink present a physical barrier to solvent evaporation.
- Use of a primer or lacquer will add to retains.
- For solvent adhesive lamination, readings off the press may be acceptable but must be rechecked after lamination. Where acceptable readings have been achieved with a specific ink and adhesive combination, a change of adhesive would require new qualification tests.

Corrective action for high GC converted product is expensive. Sometimes a further pass through the press can avoid discarding out-of-spec material. It should be noted inks other than solvent based can be sources of odor. For instance, in water-based ink, the solubilizing amine can be retained and cause problems not detectable by the GC test. In many oil-based inks for litho printing, the chemical drying process itself generates odorous side products, and special low-odor products are selected for odor-sensitive applications.

## Show Highlight on Shanghai World of Packaging (SWOP) 2017

According to the report the recent staging of swop 2017 (Shanghai World of Packaging), the leading processing and packaging exhibition in Asia, attracted 600 international and domestic exhibitors and 20,053 visitors. The visitors traveled from nearly 80 countries and regions including China, India, Japan, Malaysia, Russia, South Korea, the U.S. and Vietnam to the SNIEC fairgrounds to see latest innovations for this sector. The four-day exhibition was jointly organized by Messe Düsseldorf (Shanghai) Co. Ltd (MDS) and Adsale Exhibition Services Ltd.

According to the Hans Werner Reinhard, Managing Director of Messe Düsseldorf “With the fast pace of urbanization and the rising consumption level of the middle class, the demand for modern processing and packaging in China is also on the rise. SWOP, with its four exhibitions and innovative themes, is the one-stop platform for the most advanced technologies and ideas.”

“As one of the new member trade fairs of the interpack alliance based on interpack, the world’s leading trade fair for processing and packaging, swop has undoubtedly gained more exposure in the global market and attracted more top industry experts to China,” added Bernd Jablonowski, Global Portfolio Director Processing and Packaging at Messe Düsseldorf.

Stanley Chu, Chairman of Adsale Exhibition Services Ltd., said: “This year, swop continues to feature the entire value chain of packaging from packaging materials production and processing, primary and secondary packaging and logistics/e-commerce packaging to packaging materials and containers - all in one event. In addition, swop serves eight industries: food, beverage, bakery, confectionery, cosmetics, pharmaceuticals, non-food consumer goods and industrial commodities.

In order to help the exhibitors find high-quality potential buyers, buyers groups, consisting of nearly 100 industry associations and enterprises as well as a “business pairing” program were organized.

Exhibitors at swop 2017 addressed trend topics such as Industry 4.0, intelligent packaging manufacturing/software and sustainability. Many companies demonstrated their efforts to reduce thickness of packaging materials, lower resource consumption and improved manufacturing processes.

Six years after its introduction, the SAVE FOOD initiative by the Food and Agriculture Organization (FAO) of the United Nations and Messe Düsseldorf (organizer of the interpack trade fair), has grown into a broad-based international coalition with more than 850 international members covering relevant industries, associations, non-governmental organizations and research institutions. Vincent Martin, the China and North Korean representative from the UN Food and Agriculture Organization, talked about “Reducing global food waste through innovation and partnership.” Numerous exhibitors also picked up on this topic. Multivac exhibited its “MultiFresh” skin packaging which affixes film on the surface of the product as tightly as a layer of skin, keeping the original product’s shape intact which is especially suitable for packaging fresh meat.

The FMCG Future Zone was a popular feature at swop 2017, highlighting packaging materials and products presented by more than 200 overseas and domestic exhibitors on 107,600 square feet of exhibit space. They demonstrated the trend towards high barrier, lightweight, tamper resistance, environmental protection and customization in packaging.

The swop 2017 exhibits were complemented by multi-faceted forums, covering topics such as food processing, smart packaging, green packaging, packaging design & innovation, e-commerce and logistic packaging. The SAVE FOOD summit meeting attracted nearly 200 visitors from the food industry interested in how to extend food shelf life through innovative packaging. In addition, the Global Aluminum Foil Roller Initiative, representing more than 50% of global foil production, met during swop 2017.



Presentation counts when it comes to making a good impression in business. That's why the 13th edition of the Hong Kong International Printing & Packaging Fair 2018 - jointly organized by the Hong Kong Trade Development Council (HKTDC) and CIEC Exhibition Company (HK) Limited - promises to be bigger and better than ever as demand for excellent packaging rises with increased competition. The 2017 edition drew a record-breaking 443 exhibitors, welcoming over 15,000 buyers from 101 countries and regions in search of the industry's top printing and packaging solutions. The 2018 Fair creates excellent synergy and exposure for exhibitors by attracting buyers from across the business spectrum. Decision makers from electronics, food & beverage, advertising, retail and other industries all share a common goal at the event: sourcing the world's finest printing and packaging services to ensure continued success in their respective markets.

#### **Premier Exposure at the Industry's Leading Event**

With close proximity to the Chinese mainland, Hong Kong is uniquely suited to host the world's leading printing and packaging event. The Chinese mainland

is projected as the world's largest print market in 2017, accounting for US\$154 billion of the total global revenue of US\$668 billion. Along with continued annual growth and demand for print exports, Hong Kong is the ultimate gateway to Asia's expanding markets. The Fair not only puts exhibitors at the forefront of the industry; it presents a clear picture of future trends and what buyers are looking for. The 2018 event will also be held concurrently with the HKTDC Hong Kong Gifts & Premium Fair, creating excellent natural synergy and drawing even greater numbers of relevant buyers.

#### **In the Zone**

The 2018 Fair welcomes the return of two zones by popular demand that reflect the industry's dominant demand and trends. With soaring worldwide demand for luxury goods, the De Luxe Zone is where you will find high-end printing and packaging solutions to match. From F&B, cosmetics, jewelry & watches and lifestyle goods and more, every industry demands elite aesthetics for upmarket clientele. In the global luxury packaging market, analysts also project a continuing annual growth rate of 4.8 per cent until 2019, making the De Luxe Zone a crucial feature of the 2018 event. Demand for sustainable packaging is expanding, and figures show the global market will reach US\$244 billion in 2018 as green solutions define future success in any business. Returning with expanded new product categories in 2018, the Green Printing & Packaging Solutions Zone is where about recyclable materials, sustainable products & services and the future of eco-friendly packaging.

#### **Fair Services and a World of Knowledge**

Exhibitors gain a significant market advantage through the Fair's events and services. Achieve greater understanding of industry innovation through our expert seminars. Make lasting connections with key buyers through our networking events. Learn all about the future of printing and packaging and stay ahead of emerging trends to take full advantage of every opportunity in a competitive world. Next-gen industry trends are also a key attraction for exhibitors. Our research shows increased interest in biodegradable materials, 3D printing and digital printing, innovative retail display solutions such as digital signage, RFID tags and POP displays, along with other tech-savvy developments. Printing & Packaging Solutions for Fashion & Accessories and Innovative Retail Display Solutions will return in 2018 after its successful debut last edition.

## Mondi Marks Partnership Producing Lightweight Cement Bags for Pakistan Market

Cherat Packaging has a capacity of 600 million bags annually, has made over half a billion cement bags with Mondi's Advantage Select sack kraft paper in more than 15 years of partnership. Working together exclusively with Mondi, Cherat Packaging switched production from three-ply to mainly two-ply bags, which has reshaped the market and allowed material and cost savings. The company has country-specific exclusive rights to use Mondi's brown sack kraft paper to produce high quality cement bags and has bought only Mondi paper for its use since 2002.

In October Cherat commissioned a new Windmuller & Holscher universal paper sack line, using Mondi sack kraft paper and high-quality paper grades to enter a brand new market with the Universal packaging line. Amer Faruque, Chief Executive of Cherat Packaging, said Mondi's Advantage Select 80/85 gsm variant paper has revolutionized paper bag sales in Asia as it has provided high quality, low cost solutions.



"It has allowed us to use two plies instead of three and to dispense with perforation, which has significantly reduced paper consumption and dust at our clients' premises. The bags are lighter, yet stronger than the previous three-ply versions." Over the past years, Cherat Packaging Limited successfully launched its two-ply bags, which are now thought to be used by almost all cement plants in Pakistan.

The company's paper division has exclusive rights from Mondi for procurement of sack kraft paper in Pakistan and supplies two-ply 80/75 gram 50 kg bag to Cherat Cement, an affiliated enterprise within its group. Conny Josefsson, Sales Director Sack Kraft Paper, Mondi Group, said: "Our

Bag Application Centre conducts full-scale tests of bag filling and handling, and evaluates the performance of the paper as well as the finished bags under the predicted environmental conditions. By testing before we deliver, we help our customers create the best possible solutions to meet their needs. Working in close cooperation with Cherat Packaging, our application engineering team regularly tests the performance of the bags to ensure that they fulfill every requirement - from dust-free filling to increased efficiency."

## International Paper and Graphic Packaging Create Leading Consumer Packaging Platform

According to the press release Graphic Packaging Holding Company (NYSE: GPK) will create a \$6 billion paper-based packaging company by forming a new partnership comprised of Graphic Packaging's existing businesses and International Paper's (NYSE: IP) North America Consumer Packaging business. Graphic Packaging Holding Company will own 79.5 percent of the partnership and will be the sole operator. International Paper will own 20.5 percent of the partnership, equivalent to a \$1.14 billion value. The partnership will assume \$660 million of International Paper debt. There will be no change to Graphic Packaging's current Board of Directors or leadership team.

The transaction will be completed at a compelling EV/Adjusted EBITDA multiple of 8.6x, pre-synergies, and 6.3x, post-synergies. International Paper will have a 2-year lock-up on the monetization of their partnership interest and cannot purchase GPK shares for a period of 5 years, subject to limited exceptions.

International Paper's North America Consumer Packaging business is a \$1.6 billion revenue leading producer of solid bleached sulfate (SBS) paperboard and paper-based foodservice products globally. The business includes two SBS mills located in Augusta, Georgia and Texarkana, Texas with annual production capacity of 1.2 million tons of SBS, three converting facilities in the U.S. and one in the U.K., with the capacity to convert 250,000 tons of SBS paperboard into over 24 billion units of paper-based cups and cylindrical containers. The business is projected to generate Adjusted EBITDA of \$210 million in 2017.

"We are excited about the platform for future growth created by this combination," said President and CEO Michael Doss. "We expect the transaction will significantly

increase our mill production and converting scale, meaningfully increase our exposure to the growing foodservice market, provide significant runway to realize synergies, and drive strong financial results."

"The \$75 million in synergies is compelling and will be driven by cost reductions, increased paper board integration, and procurement and mill efficiencies." The transaction has been approved by the Board of Directors of both companies. The transaction is subject to standard closing requirements and regulatory review and is expected to close in early 2018.

## **New BOBST M8 flexible packaging line with Digital Flexo technology Launched at Labelexpo**

Labelexpo Europe in Brussels sees the announcement of the BOBST M8, a high speed, highly automated print production and finishing system for flexible packaging and related work. Previous Labelexpo Europe shows have been prime venues for BOBST to première some of its most innovative technologies, so news that the company was keeping details of a brand new development under wraps right up to the show opening night, sent the industry buzzing with anticipation.

The announcement was certainly worth the wait. The new BOBST M8 line is multi-process, multi-web inline printing and converting machine. For the first time, users are offered the advances - and the advantages - of BOBST's unique Digital Flexo technology on a machine with web widths up to 1070 mm and speeds up to 400 m/min. BOBST Digital Flexo features include complete digital control of the press, with camera-monitored closed loop press operations that enable fully automated pre-register and adjustment of the print pressure and register, and camera-based print quality/PDF comparisons at all speeds.

"These capabilities will have momentous effects on today's market dynamics, with their golden rule of diversify to succeed," says Matteo Cardinotti, Managing Director of Bobst Firenze and Head of Narrow & mid-web multi-process Product Line. "Most printing companies today know they need to diversify in order to grow or even maintain revenue streams, and many label printers have been adding equipment to produce short run customized packaging to complement their revenue. The new BOBST M8 press is uniquely suited to forward-thinking label printing companies that want to move into the flexible

packaging market in a way that exceeds contingency needs to allow strong and sustainable growth in this sector."

Important to users is the total flexibility the press offers in terms of substrates, consumables and applications, being able to run UV, water-based or solvent-based inks. Alongside digital control and total color consistency, the M8 delivers automatic on-the-fly job changeover sequences and up to 95% press uptime. These distinctive features enable the press to operate profitably with all run lengths, including just-in-time orders. Also truly remarkable is the spectrum of substrates handled by the press, which basically includes all types used in packaging reel-to-reel printing: film, aluminum foil, lami-tubes and paper. The cardboard version of the M8 can handle substrates up to 600 gsm.

## **Conprinta – Corrugated Pre-print Machines for Small Runs**

According to the news One of today's market challenges for corrugated box manufacturers is to deal with the inherent complexity of running an increasing share of small volume, high graphics box orders on demand. For this purpose, Conprinta Printing Technology offers a Hybrid Preprint with combined analog and digital print in a designated press.



The IMD flexographic printing system and PVU series of products for digital printing systems enable high quality preprint. The company claims they are suitable for secondary packaging and POS products of all kinds. Conprinta also offers technology and software for "PrePrint on Demand," a process solution that supports maximum flexibility. Their machines are currently available in widths of 1100 mm, 2500 mm and 2800 mm (43", 98", and 110"). Available.

## Cooperation Between Drupa and Federazione Carta e Grafica

The new Italian paper and graphics umbrella organization Federazione Carta e Grafica established in June 2017 and drupa agreed on an extensive cooperation. The primary goal is to recruit Italian exhibitors for participation in trade fairs in the global drupa portfolio, thereby paving the way for them to develop international markets. Forming part of this federation ACIMGA, the Italian manufacturers' association of machinery for the graphic, converting and paper industry, plays a key role in this agreement: as a partner it will be actively involved in trade fair participations and will take care of their operative implementation.

Italy is an important market for drupa and accounted not only for the third largest group of visitors at the 2016 event after Germany and India but also ranked third after Germany and China in terms of exhibitors, thereby constituting a firm pillar of this world leading trade fair. On top of this, the cooperation with the Federazione Carta e Grafica accompanies the longstanding, successful work by Honegger Gaspare Srl., Messe Düsseldorf's official foreign representation in Italy. This means Honegger Gaspare will also continue serving as the principal point of contact for Italian exhibitors and visitors - be it for drupa 2020 in Germany or for one of the drupa satellites around the globe.

The international portfolio of trade fairs for the print and packaging industry now includes seven events in six countries. Alongside its No. 1 trade fair drupa in Germany Messe Düsseldorf organizes outstanding regional trade fairs with its subsidiaries on key growth markets. These include Printpack Alger in Algeria (11 - 13 March 2018), Indoprint in Indonesia (19 - 22 September 2018), All in Print in China (24 - 28 October 2018), IPAP in Iran (October 2018) as well as Pack Print International in Thailand (18-21 September 2019) and Pacpro in China (25 - 28 November 2019).

## Koenig & Bauer/Esco – Workflow Solutions for Package Printing

The two companies recently agreed to further strengthen their partnership. To this end, colour management and workflow solutions from Esco were installed at the Koenig & Bauer demo center in Radebeul and are available with immediate effect for live presentations to interested

customers. As a solution provider to the packaging industry, Koenig & Bauer sees Esco as a strong partner when it comes to process-integrated workflow solutions. Accordingly, it is able to show users the Equinox colour management technology, which enables printing with an extended colour gamut, with the necessary RIP architecture being provided by Esco's Imaging Engine. One of the benefits of an extended colour gamut is that printers are spared the constant wash-ups which accompany the use of spot colours. Job changeover processes are accelerated and extra production time is gained.

A growing number of brand owners are today accepting the use of an extended colour gamut as an alternative to company- or product-specific spot colours. It is thus all the more important for both companies to present practically integrated pre-press and print solutions which meet the highest quality standards. After all, a wider gamut alone is not sufficient; for the overall process, the absolute stability of all relevant parameters in print is also imperative.

Packaging printers who come to the Koenig & Bauer customer centre can in future not only become acquainted with the latest print and finishing technologies, but also obtain a more comprehensive overview of the integrated process and the range of workflow solutions for packaging production. Esco will likewise be using the new presentation opportunities in Radebeul to inform its own customer base. The first joint activities of the two companies already took place planned within the framework of the Print & Postpress Innovation Days, held at KBA-Sheetfed in Radebeul from 29th November to 1st December 2017.

## Windmüller & Hölscher – Apex named Certified Showroom Partner for Anilox Rolls and Sleeves

According to the news the supplier of machinery and systems for production and converting of flexible packaging, has confirmed Apex International to be certified partner of aniloxes for the highly advanced flexo printing presses in the showroom.

Apex will manufacture high-quality ceramic coated (Porosity: < 1 % - Hardness: 1450 Hv) and laser engraved anilox rolls and sleeves for the W&H printing presses.



Apex obtained this position by successfully completing the “Ablegetest” in the technological center of Windmüller & Hölscher in Lengerich. The test is used to evaluate the clean doctoring of the anilox roll at high speeds, and it is a major factor in the approval of the performance of an anilox for Windmüller & Hölscher and the Apex results were named good to very good.

## Comexi – The Next Evolution in Lamination

The new ML2 multipurpose laminating and coating machine goes a step beyond Comexi’s Dual Laminator which is the group’s top seller and in the past three years has doubled the sales of this specific machine. This has encouraged the company to create a new laminator which they hope will be the best on the market in both their segment and perhaps across the entire market. “The ML2 achieves the highest lamination standards, improving all of the current solutions with new features and other boosts to improving productivity. Simply put, it will allow converters and customers to face new packaging challenges,” said Carlos Rodríguez, Comexi’s laminating brand manager. He gives the assurance that the new machine will contain more versatility and productivity features.



The ML2 has a wide range of solutions to facilitate daily operations, increase productivity by improving running speeds, now up to 450 m/min (1467 fpm), while also helping reduce downtimes. Its configurable six to nine meter tunnel (20 to 30 ft) allows it to be adapted to different market demands. Additionally, the ML2 is fitted with a three roller NIP technology that permits stronger final optical results across a variety of printed products. Depending on the model, it can operate with a maximum web width of 930, 1330 or 1530 mm (36.6”, 52.4” or 60.2”).

Additionally, the ML2 can laminate using all kinds of adhesives: solvent-based, water-based or solvent-less. It can also perform a wide range of coating and in-register applications like cold-seal, inks or varnishes.

## Sun Chemical – Formation of Saudi

According to the news the company has finalized the formation of a joint venture with Alliance Holding Company LTD (parent company of Ink Products Company, Ltd.) and will now operate under the name Sun Chemical Saudi Arabia LTD.

As a manufacturer of printing inks in the Arabian Peninsula, Sun Chemical Saudi Arabia Ltd will continue to be a leading ink supplier to the packaging and publication market in the region. Sun Chemical previously announced that it will own the majority share in the new joint venture. Terms of the deal were not disclosed.

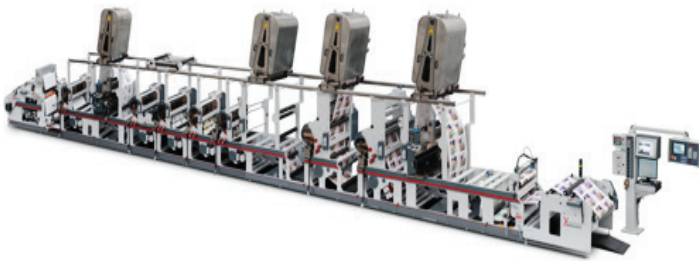
Alliance Holding Company LTD is a large Saudi investment conglomerate with a diversified portfolio of companies in the retail and wholesale trading of electrical products and building materials. Its subsidiaries are engaged in the manufacturing and distribution of lighting products in Saudi Arabia (through a JV with Philips), Egypt and Malaysia, as well as the manufacturing of industrial paintings and ink products in the Kingdom.

## Omet – Solvent-Base Flexo for the Varyflex V2 Platform Press

The Omet Varyflex V2 is said to a most flexible narrow- and mid-web press for packaging printing and converting. Thanks to its unique platform design, it is able to combine a wide range of printing and finishing technologies in-line. This includes flexo, gravure, screen and offset printing, while hot or cold foil processes can be integrated in order

to supply a complete range of finishing. This configuration includes the integration of drying curing stations for both UV and solvent-based flexo printing units.

Solvent-based flexo printing is mainly used in food packaging printing, in particular on plastic films, laminates or aluminum material for yogurt lids. Such inks are much cheaper than UV inks, but they need to be cured through specific hot air drying systems. Omet offers a wide range of hot air drying modules with different dimensions to better fit into the machine. It is also possible to combine UV curing and hot air drying systems on the same flexo unit. Performance of the Varyflex V2 is improved by interchangeable groups that can be moved everywhere in-between the flexo stations according to the job to be printed.



The Varyflex V2 is available with web width 430 mm (16"7/8), 530 mm (20"7/8), 670 mm (26"3/8), 850 mm (33"4/8) and confers the possibility to print with solvent-based flexo or rotogravure technology in the full compliance with international standards and Atex regulations in terms of explosion-proof equipment, which guarantees a safe working environment.

## Toyo Ink SC Holdings – Expanding business in Turkey

Toyo Ink SC Holdings announced that its subsidiary company Toyo Printing Inks Inc., a manufacturer of inks and coatings in Turkey, has decided to purchase approximately 62,000 sqm. of land for the future expansion of its operations in the Manisa Province. The new plot is located in the Manisa Industrial Zone, the same industrial park that is currently home to Toyo Printing Inks.

Toyo Printing Inks plans to use the land to build not only a new manufacturing facility for the upgrading and expansion of existing R&D and production facilities, but also to construct a new production site for polymers, a key material component in Group products, such as inks, coatings and adhesives. The polymers manufactured in

Manisa will be used to improve the quality and performance of Toyo Printing Inks' products, and to diversify its portfolio and markets. Construction of the new polymer plant is expected to begin in 2018 and be completed by late 2019, followed by further capacity increases to ink and coating production within three to five years. With the increased capacity, annual sales are estimated to reach about EUR 65 million by 2022.

## Formeco – Solvent recovery systems

The company's distillers allow the recycling and the re-use of degreasing and washing solvents. Through a distillation process, they separate the contaminants (resins, polymers, pigments, paints, oils, etc.) from the original solvent. The boiling of the solvent is accomplished by a peripheral heating jacket filled with diathermic oil, heated by an electrical element.

The vapors are then conveyed to a condenser cooled by air or water. For its reuse, the condensed solvent is collected in a tank. The contaminants remain as a residue inside a disposable bag named "Rec-Bag" and in case of liquid residue, by tilting the unit itself. The distilled solvent characteristics are not altered by the distillation process, which can be carried on repeatedly. The units of the series Dynamic are distillers which allow the recycling and the reuse of degreasing and washing solvents.

A rotating scraper having adjustable metallic blades keeps the content to be treated constantly in movement allowing maximum extraction of solvent while avoiding the residues to stick to the boiler's wall and bottom. An automatic drying cycle will allow the residues to be extracted in solid or powder state.

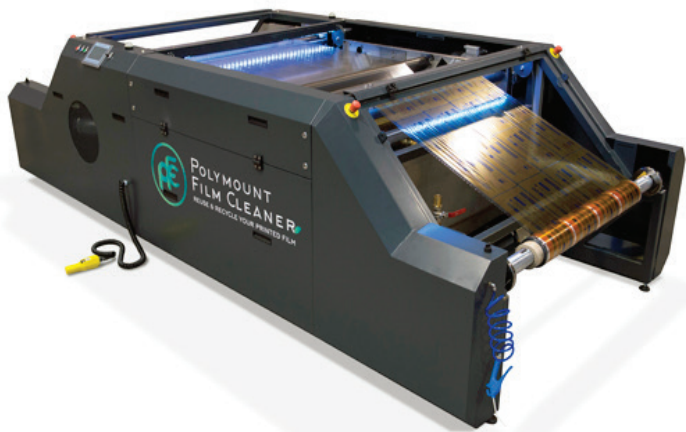


All Formeco units can be connected to a vacuum unit, suitable for high boiling solvents or for those flammable ones which have a close boiling point and flash point. Such distillers are operated in print shops, where usually a blend of perchlor and buthanol is used; these are products which need the vacuum distillation because thermolables.

Very common is also their use in the field of flexible packaging production, where they mostly use ethyl-acetate for washing the printing equipment.

## Polymount – Reintroduction of Film Cleaner Device

According to the news Polymount has announced the reintroduction of its Film Cleaner. First unveiled at drupa 2016, the company was initially swamped with orders and requests, but at the time CEO Jan Willem Boers felt that the cleaner was not yet ready for use. Now, after a period of redesign and tweaking, the company is building its newest versions and taking orders for more.



“I felt at the time, it wasn’t yet ready. This was a hard decision to make. But now I have total confidence that the Polymount Film Cleaner is completely capable of providing a valuable service for all film printers,” said Boers while editors from Flexo & Gravure Global visited the company’s Dutch headquarters.

## Bauer Logistik- Compact Design Cylinder Loading Device

The Wega S 1410 cylinder transport system is designed for the company’s Slim Line S automatic lines with hollow cylinders. Introduced at drupa 2016, it was delivered for the first time in July 2017.

Wega SD 1410 stands out with customizable dimensions for any hall size, flexible, self-centering cylinder loading and rapid, safe transport. It can be integrated into all processes used in fully automatic production lines for standard shaft and hollow cylinders.



The system is provided with a modular crane rail with expandable steel construction to incorporate hollow and shaft cylinders up to max. 500 kg, face length of 450 - 1,600 mm (18” - 63”) and total length of up to 2,350 mm (93”), circumference of 450 - 1,000 mm (18” - 39”). It offers cylinder loading with special gripper technology suitable for shaft and hollow cylinders. High transport speed and drive dynamics with very accurate load positioning are achieved due to servo drive technology in combination with a position measurement system. All this makes the Wega S 1410 an ideal device for operating fully automatic production lines.

## Messe Düsseldorf/IIP – First Trio of Indian Trade Fairs

From 26 to 28 October 2017, the first edition of the trade fair trio comprising pacprocess India, indiapack and food pex India will rank top of the agenda at the Pragati Maidan exhibition center in New Delhi.

Forming part of the interpack alliance, this trio is the result of cooperation between Messe Düsseldorf and the Indian Institute of Packaging (IIP). The ISPI International Summit for Packaging Industry conceived and organized by

the IIP and drink technology India by Messe München will be held concurrently with the fairs.

More than 200 companies have registered for these trade fairs and will be presenting solutions from fields such as packaging machines, automation technology and components/auxiliaries as well as recycling and environmental technology (pacprocess India). Also on display will be packaging materials as well as machinery and technology for the manufacturing of packaging and packaging aids (indiapack).

The ranges of the trade fair trio of the interpack alliance are complemented with machines and equipment for the manufacturing of food, confectionary and bakery products (food pex India). Drink technology India organized concurrently by Messe München focuses on the segments of beverages and liquid foods. The long established ISPI International Summit for Packaging Industry now organized by the IIP in parallel with these trade fairs this year comes under the heading of "Packaging - the Growth Driver".

The trade fair trio comprising pacprocess India, indiapack and food pex India is held every year. Next year Mumbai will host the event.

## **Kodak – Opening of New Flexo HUB in Brussels**

The suppliers of systems and production solutions for package and label printing, is boosting its global commitment to flexo technology. On September 25, 2017, the first day of Labelexpo Europe 2017, the company celebrated the inauguration of the new Kodak Flexo HUB in Zaventem, near Brussels.

As an interactive platform, the Kodak Flexo HUB will promote cooperation between Kodak, flexo printers, trade shops, brand owners, technology suppliers and industry associations. In addition to presenting flexo solutions from Kodak, a key role of the new center is to highlight a host of real-life packaging projects. Starting right now, the Kodak Flexo HUB gives visitors an opportunity to experience the Flexcel NX System in extensive demonstrations, take part in technical training seminars or have Flexcel NX plates made in line with their requirements so that they can conduct their own printing tests. Furthermore, Kodak also has plans to hold special events and seminars on packaging topics at the Flexo HUB in the future.

## **Kite Packaging Launch New ‘Stretch Safe’ System**

Kite’s ‘Stretch Safe’ system is a manual mobile wrapping system, designed to wrap any pallet under 2 meters in height. Fast, easy to use and highly efficient a key feature of the system is its mobility, something that traditional automated turntable solutions cannot offer.

‘Stretch Safe’ has proved to be popular with customers who have seen increased consumption of hand wrapping film but for whom the volumes required don’t justify the capital investment of a fully automated pallet wrapping system. A spokesman for the company commented, “Research carried out by packaging technologists in our specialist ‘Load-retention’ division identified a great opportunity for a system like ‘Stretch safe’. We have received hugely positive feedback from customers and we see the new system as the perfect addition to our range’.

The system can be used to wrap any pallet load or object as long as there is 600mm of space around the pallet. The tension control allows users to consistently wrap pallets and the system has shown a 40% time saving compared to the traditional method of hand wrapping. The system also comes with a roping device, this narrows the film until a rope is created, ensuring the pallet is secured from the top and bottom, and the cutting device allows users to simply cut the film once finished.

Used in conjunction with Kite’s high-performance stretch film, exclusively developed by Kite specifically for use with the stretch safe system, it offers high puncture resistance, high holding force, and a 60% stretch to give over 3000 meters of film.

## **Corrugated Industry Makes Strides in Reducing Environmental Impact**

The Corrugated Packaging Alliance has released a new U.S. corrugated industry life-cycle assessment (LCA), which shows the corrugated industry’s environmental progress.

“The LCA results demonstrate the efforts our mills and converting facilities are making to reduce the industry’s supply chain impact on the environment,” says CPA Executive Director Dennis Colley. “Sustainable forest procurement, along with the high old corrugated

containers [OCC] recovery rate provides for a well-balanced system of fiber and supports the sustainability of our industry's products."

The LCA examined the effects of a 1-kg industry-average corrugated product manufactured in 2014 on seven environmental impact indicators, including global warming potential (greenhouse gas emissions), eutrophication, acidification, smog, ozone depletion, respiratory effects, and fossil fuel depletion, and four inventory indicators, including water use, water consumption, renewable energy demand, and non-renewable energy demand.



The corrugated industry reduced its GHG emissions by 35% between 2006 and 2014. The reduction was driven by increased OCC recovery and use of energy generated from renewable, carbon-neutral biomass and decreased overall use of fossil fuels.

The recovery rate for OCC increased from 72% in 2006 to 89.5% in 2014. As more is recovered, less goes to landfill, thereby reducing methane emissions.

Other notable improvements between 2006 and 2014 include a 29% reduction in the effects of nutrient releases on receiving waters and soils (eutrophication); a 23% reduction in photo-chemical ozone creation; a 21% reduction in water use; and a 21% reduction in respiratory related effects.

The peer-reviewed study, commissioned by the CPA and conducted by the National Council for Air and Stream Improvement is the third study in a series of industry LCA's. It was conducted in accordance with ISO 14040/44 standards and guidelines for life-cycle assessment studies.

## Recycled Content in Corrugated Boxes Reaches Nearly 50%

According to the research The Corrugated Packaging Alliance (CPA) has announced that advancements in papermaking technology and the availability of high-quality fiber have made it possible to reuse more old corrugated containers (OCC) in the manufacturing process while at the same time maintaining the strength characteristics of new boxes.

The recovered paper utilization rate in containerboard has been fairly stable during recent years, but it increased from 27% in 1990 to 47.3% in 2000 and reached 48.4% in 2015. The amount of fiber reused in boxes varies for different applications, with recycled content being as high as 100% for packaging many consumer product goods items and as low as 38.4% for packaging direct food-contact items like fresh produce.



Corrugated products can be made from 100% new fiber, 100% recycled fiber, or a blend of these fibers. The worldwide market needs both new and recycled fiber in order to produce the best quality of corrugated material and ensure a consistent and sustainable supply.

The OCC recovery rate reached a record-high 92.9% in 2015. Both high recovery rates and high reuse of fiber are examples of the corrugated industry's commitment to producing sustainable packaging.

## New Bobst Flexo Plate Mounter Optimizes Closed Loop Process

The latest Smart DigiMount improves efficiency on narrow- and mid-web inline flexo presses and multi-process printing & converting lines that make use of sleeve technology.

Smart DigiMount features advanced electronics for improved speed and accuracy of plate mounting. It handles sleeve repeats of 254-812.8 mm and optionally 1066.8 mm (10-32 in optionally 42 in). This extends its capabilities to accommodate larger web widths and formats.



Also new is an enclosure to exclude ambient light, helping the positioning system to operate consistently whatever the environment. The original DigiMount version is also still available to suit print cylinder repeats of 139.7 - 609.6 mm (5.5 - 24 in)

Matteo Cardinotti, managing director of Bobst Firenze and head of narrow & mid-web multi-process product line, said: "Every concept within the BOBST Digital Automation program is continuously upgraded or extended so as to keep pace with the equipment evolution and to always ensure new improved levels of integrated automation.

"This has led to the development of the Smart DigiMount version of the plate mounter in order to provide a solution for Bobst narrow- and mid-web production lines dedicated to the production of labels, flexible packaging or carton packaging that use sleeve technology. This can accommodate larger formats and web widths, such as the M6 and the M8."

Bobst is a leading supplier of equipment and services to packaging and label manufacturers in the folding carton, corrugated board and flexible materials industries.

## Uflex Focusing on Resource Optimized Packaging for Essential Indian Staples

According to the news Uflex in an endeavor to extend the very use of flexible packaging is particularly paying a lot of emphasis on developing resource optimized packaging for essential staples like Pulses, Wheat Flour, Sugar, Salt and Oil.

Mr. Jeevaraj Pillai, Joint President, Packaging and New Product Development, Uflex Limited pointed out, "Flexible Packaging sector in India will get the real boost when high volume (bulk) commodity food items like Pulses, Wheat-Flour, Sugar, Salt and Oil are marketed in packaged form. In India almost 80-85% of unbranded food products are still sold loose without pre-designated packaging. With steadily increasing demand from urban consumers for branded high volume commodity food items, we are now getting a lot of enquiries from popular food brands for developing cost effective packaging particularly for the essential staples category. We have recently developed a 2 ply laminated packaging for wheat flour comprising a specialized Polyester (PET)/ specialized Polyethylene (PE) structure.

## Vision Extension For Flexible Packaging

DG Press Services and Abaker Printing Company, Saudi Arabia, have come to an agreement to modify a Vision printing press. The decision was made based on the rapidly changing market of the printing industry in which the demand for (flexible) packaging is increasing more and more.



The machine was originally manufactured for the production of business forms. Fortunately, the modular design of our printing presses offers the opportunity to change the configuration to allow printing on other substrates. In this case, the business forms machine will be modified to a machine for flexible packaging. We do this by integrating the required modules for web tension and combining flexo- and offset printing techniques for the highest printing quality on flexible substrates.

If you are operating a Vision printing press and you are looking to enter a different market segment, feel free to contact us about a solution. In many cases there is no need to start looking for a new printing press. The possibilities to modify your printing press for other substrates and/or market segments are endless.

## Gravure Printing with Water Based Inks

Uteco, BASF and FLINT, along with an important converter, formed a working team for the development of water based inks for them to be able to offer to their customer's top level solutions for rotogravure printing. The first tests gave positive results. They were also able to introduce some improvements during the second stage including optimization of cylinders' engraving, optimization of the drying system, optimization of machine parameters, resins and ink improvement, and new software and hardware of ESA system. The companies will continue the developments and will present future developments in 2018, during the Print 4 All event.

## Amjet Shanghai Has Again Partnered With Esko

According to the news Chinese flexo platemaker Amjet Shanghai, a division of Amjet Group, has again partnered with Esko to install the first CDI Crystal 5080 XPS system in Greater China. The investment in platemaking process technology includes the latest Automation Engine prepress workflow as well as the latest screening technology for flexo printing.

With the new solution, Amjet Shanghai, a repeated winner of the FTA Award in the United States, aims to combine greater prepress workflow and the highest quality screening technology to improve efficiency and to enhance the quality of its packaging and printing.

## Plastic Packaging Manufacturers Continue To Be Very Optimistic

According to the IK association German plastic packaging manufacturers are extremely optimistic about the economic development at the beginning of the New Year.

90% of the companies surveyed rated the current economic situation as good. The already very confident survey results at the beginning of 2017 - at that time 70% of IK members gave the economic conditions a good rating - are thus clearly exceeded. Sales expectations in the first quarter of 2018 are also more positive. The assessment of export development alone is almost identical to 2017. Nearly 60 percent of companies also expect higher raw material prices, which could also affect the price development of plastic packaging. However, the earnings situation remains tense.



All in all, the result of the IK economic trend for the first quarter of 2018 shows a further increase in expectations for companies, after the two preceding years have already produced above-average results. However, this promising prognosis must not obscure the fact that increasing danger threatens for the business location Germany, comments IK CEO Ulf Kelterborn the current results.

In addition to the still unresolved problem of high electricity costs, Germany now has to prepare for ever-tougher international tax competition. In addition to China, other industrialized countries want to react to the tax cuts for companies in the US with corresponding tax reforms. The effective tax burden for companies in Germany of over 28% is already comparatively high and therefore urgently needs to be improved.

## Zecher Establishes Anilox Roller Cooperation with Daetwyler USA

According to the source with a growing distribution network, the anilox roller manufacturer Zecher GmbH is continuously expanding into new regions and is driving the growth of the company forward. “The USA offers a high level of sales potential with the world’s largest flexographic printing market, which we haven’t proactively explored until now. This will now change.” says Zecher’s Sales Manager, Thomas Reinking.

With Daetwyler, Zecher has brought a partner with a great market position on board whom, from now on, will supply customers in the United States and Canada with Zecher anilox rollers. With its strong presence in this sales region and its excellent customer service, Daetwyler has successfully established itself in the market over the last 40 years and is therefore an ideal cooperation partner for us to expand our international sales.

Daetwyler shares the benefits of cooperating with Zecher and wants to make the best use of the synergies of this partnership. “With Zecher’s premium anilox rollers, Daetwyler will further strengthen its reputation as a supplier of high-quality pressroom products with a strong technical know-how in sales”, says Roger Heid, Managing Director of Daetwyler USA.

With Zecher’s anilox rollers as a complement to the product portfolio, Daetwyler wants to make it possible for its customers to obtain a comprehensive range of services from a single source. “When it comes to a demanding printing performance, doctor blades are only part of the equation”, says Kurt Oegerli, Head of the Graphic Arts Division of Daetwyler USA. “Through our partnership with Zecher we can offer our customers a complete printing solution along with the passion for excellence that our customers expect from us.”

From the point of view of the IK, further location risks are the rapidly growing shortage of skilled workers as well as the spatial and digital infrastructure. These factors could develop into a growth brake faster than expected. An effective federal government must make forward-looking decisions as quickly as possible.

## Blown Films Tailored For Lamination

Reifenhäuser Blown Film GmbH is, one of the leading providers of blown film extrusion lines, is offering blow films which are perfectly suited for lamination - the EVOLUTION Ultra Flat haul-off.



This film is produced in response to the problem of the wave phenomena where surfaces are not perfectly plane, and therefore, not very suitable for lamination. The secret of the film is that it’s installed exactly at the point where optimum procession conditions are available for flattening the web. The benefits of using the film include low investment costs and high functionality and flexibility.

## First Indian Retortable Spouted Stand-Up Pouch

According to the news some three months ago Jo’s - a leading snacks brand in North India that also happens to be an existing client of Uflex approached the company for developing flexible packaging solution for its new range of cold beverages. They wanted an optimized packaging solution with a shelf life of 6 months for the cold beverages at room temperature doing away with the cold chain.

Uflex engineered a bespoke foil based 4 tier bottom gusset stand up pouch with a specialized retort sealant layer to withstand sterilization at elevated temperatures. This pouch offers a shelf life of 6 months at room temperature and actually does away with the cold chain be it during transit (using reefers), at the point of sale or at the consumers’ end for that matter.

## Global Flexible-Packaging Market to Exceed \$293 Billion In 2025

According to the new market research report launched by Inkwood Research, the global flexible-packaging market is anticipated to reach \$293.03 billion by 2025. The market is growing at an estimated CAGR of 4.7% during the forecast period 2017-2025.

The research focuses on market trends, leading player and supply chain trends among others, and has a comprehensive market assessment across North America, Europe, Asia Pacific, Latin America, Middle East & Africa.

## New Binder for Lamination Inks Helps to Enhance Print Quality on Packaging Film

HI-THANE A-890K from SONGWON is an aliphatic, solvent based polyurethane ink binder for use in the manufacture of gravure printing inks for a variety of laminates. This new binder is distinguished by its exceptionally high lamination bonding strength on various plastic films, especially PET, nylon and OPP. Its outstanding heat resistance makes it suitable for use in both retortable and non-retortable flexible packaging laminates. With its very high re-solubility, HI-THANE A-890K counteracts scale formation in gravure printing cells, improving print quality and reducing machine maintenance.

This versatile binder helps to boost the color strength of inks, promoting top quality printing results. HI-THANE A-890K is suitable for use in pigment grinding to help achieve the required rheological properties and the smaller particle sizes that increase the color strength of prints. It can be used on its own or together with other binders, such as vinyl chloride vinyl acetate and polyvinyl butyral copolymers.

## BASF Expands Capacity of Germany's Engineering Plastics Compounding Plant By 70,000 Tons

BASF's expanded compounding plant at Schwarzheide, Germany has begun operation, which can now process up to 70,000 tons more Ultramid polyamide (PA) and Ultradur polybutylene terephthalate (PBT) each year. With the

expansion, the Schwarzheide site becomes the biggest PA and PBT compounding capacity within BASF globally. Its global compounding capacity for PA and PBT will thus top 700,000 tons per year. "The bigger plant enables us to accompany our customers' growth in the long run, at the highest technical level and with the best plastics," said Jürgen Becky, Head of BASF's business unit Performance Materials Europe since May 1. "The expanded plant represents state of the art technology in the plastics market and gives us even more flexibility in our production process." Ultramid and Ultradur are used to make high-performance components for the automotive, electrical and electronics industries, as well as for the construction and furniture sectors. The components include oil pans, engine mounts, sensors and connectors, chairs and fastening elements.

## BASF to Acquire Solvay's Global Polyamide Business

BASF and Solvay has recently signed an agreement related to the sale of the latter's integrated polyamide business to BASF. The purchase price on a cash and debt-free basis is € 1.6 billion. They aim to close the transaction in the third quarter of 2018.



The new investment would complement BASF's engineering plastics portfolio and expand the company's position as a solution provider for various industries including transportation, construction and consumer industries, among others.

## Middle East and Africa Flexible Packaging Market

Middle East has one of the highest GDP per capita, so the consumers have more disposable income to spend on e-commerce retail, luxury retail and retail in stores. With the increase in sales of products, the packaging market will be growing to cater to the needs of both the consumers and retailers. Countries like Qatar have GDP per capita more than USD 100,000 so as the purchasing power increases so does the packaging market. The key determining factors of packaging are varying consumer trends, light weight of the products, different sizes, shelf life and ease of recycling. Flexible packaging helps in addressing these concerns and that is why it is being widely adopted for several products across different industries. Increasing demand for packaged foods is also one of the major growth drivers of this industry.

The Middle East and Africa flexible packaging market is expected to grow from USD 8.55 billion in 2016 to USD 12.12 billion by the end of 2021 at a CAGR of 5.99%. The UAE leads the market in terms of revenue followed by South Africa. According to the report Israel is estimated to register the highest growth. This growth is attributed to the growing economies of the region and the relatively low inflation. This gives the consumer more money in hand to spend on products thereby improving the overall lifestyle of the population.

The concerns for this area are that the region is prone to be unstable. This instability caused due to extremism and terrorism affects the companies investing in the market and also spooks the future investors. With the USA providing a lot of support to countries from this region these fears

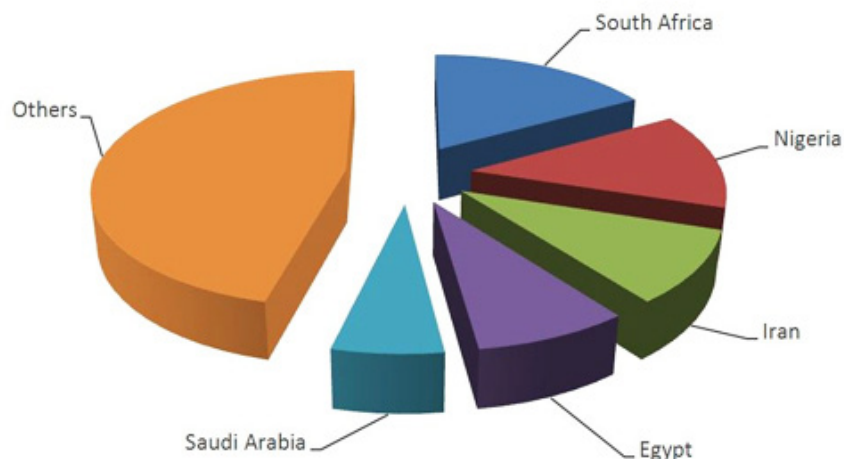
should be allayed. As sanctions against Iran are being lifted gradually this region will grow and prosper. Africa is on the rise. Economy, for the most part, is booming given the relatively stable political scenario in the region. Africa's GDP growth from 4.7% in 2013 to 5.2% in 2014 and the FDI growth of 16%, reaching USD 43 billion in 2014, shows a positive economic trend. Countries across Africa, from mineral-rich Sierra Leone and Congo to agrarian economies like Ethiopia and Rwanda, have shown growth across multiple macro-economic parameters.

With inflation in the region going down from 10.7% in 2013 to 6.2% in 2014, domestic spending is on the rise. Retail, from e-commerce to mom and pop stores, has racked up the biggest gains. Packaging in Africa is fast catching up to meet the growing needs of a continent that is booming with investment from a vast number of foreign players. Given the relative lack of proper infrastructure, the vast distances that goods need to be transported over land from a few international ports make flexible packaging a necessity.

Food and industrial goods imports into Africa make up a significant share of the flexible packaging market in the region. Rising demand for packaged foods, a need to keep costs down and investments in food processing are propelling the growth of flexible packaging in the region. Nigeria is expected to have

the highest growth in terms of adoption and investment of flexible packaging, with the rest of Africa showing single-digit growth for the market. While missing and underdeveloped supply chains remain an obstacle for rapid growth in demand for flexible packaging in the region, the opportunities for vertical growth in manufacturing and food processing are tremendous.

**Middle East & African Flexible Packaging Consumption by Country**



Source: PCI Films Consulting Ltd / Industry estimates

## Members Directory (South Zone)

- 1) M/s. Al-Amna Packages  
Mr. Asim Fazal  
Plot F-491, Ground Floor S.I.T.E, Karachi  
Phone: 021-32595496  
Email: asim.alamna@yahoo.com  
URL: www.alamnapackages.com
- 2) M/s. A To Zee Printers  
Mr. Muhammad Suhail  
Plot No. A-24 G, S.I.T.E, Karachi  
Phone: 021-32561405, 32578701  
Email: atozeprinter@gmail.com
- 3) M/s. Continental Print & Pack (Pvt.) Ltd  
Mr. Ali Morani  
A-24/H, S.I.T.E, Karachi  
Phone: 021-32552218-19  
Email: cpld10@gmail.com  
URL: www.contipack.com.pk
- 4) M/s. Cloud Packaging (Pvt.) Ltd  
IR Group  
Mr. Imran Rehman  
Plot No.189/A, Office No. 809,  
Portway Trade Centre, SMCH, Karachi  
Phone: 021-34329040, 021- 34329040  
Email: ir@irgroup.com.pk  
URL: www.irgroup.com.pk
- 5) M/s. Eastland Industries Corporation (Pvt.) Ltd  
Mr. Ghazanfar Tahir  
B/60 Manghopir Road, S.I.T.E Karachi  
Phone: 021-32581073-74, 021-32570759,  
021-32572384, 021-32550146-47  
Email: ghazanfar@eastlandind.com  
URL: www.eastlandind.com
- 6) M/s. Fazleesons (Pvt.) Ltd  
Mr. Tarique Rehman Fazlee  
F-42, Hub River Road, S.I.T.E, Karachi  
Phone: 021-32563971, 021-32572210,  
021-32565446  
Email: tarique.rehman@fazlee.com  
URL: www.fazlee.com
- 7) M/s. Hani Gravure Prints  
Mr. Muhammad Khalid  
1st Floor, F-87, Central Avenue, S.I.T.E, Karachi  
Phone: 021-32560777  
Email: hanigravureprints@gmail.com
- 8) M/s. Intercom Trade Services (Pvt.) Ltd  
K-Group  
Mr. Muhammad Kafil Sheikh  
245/2/F, Block-6, PECHS, Shahrah-e-Faisal, Karachi  
Phone: 021-34549986  
Email: k@kgroup.com.pk  
URL: www.kgroup.com.pk
- 9) M/s. International Chemplast (Pvt.) Ltd  
Mr. Arshad Riaz Fazail & Mr. Nasir Mumtaz  
509, 5th Floor, Progressive Plaza,  
Beaumont Road, Civil Line Quarters, Karachi  
Phone: 021-35652822-021-111-325-325  
Email: arshad@icplpk.com, nasir@icplpk.com  
URL: www.icplpk.com
- 10) M/s. Jilani Industrial Corporation (Pvt.) Ltd.  
Mr. Saad Habib  
F-312/A, S.I.T.E, Karachi  
Phone: 021-32588327  
Email: saadhabib1979@gmail.com
- 11) M/s. K.B. Enterprises  
Mr. S.M Faraz  
F-24, S.I.T.E, Near SSGC, Karachi  
Phone: 021-36605344, 021-36689054  
Email: info@kbenterprises1.com  
URL: www.kbenterprises1.com
- 12) M/s. Kamil Packaging (Pvt.) Ltd  
Mr. Muhammad Ibrahim  
A-70, Manghopir Road, S.I.T.E,  
Opp. Valika Hospital, Karachi  
Phone: 021-32030021-021-32596629  
Email: ibrahimajmalk@gmail.com,  
info@kamilpackaging.com  
URL: www.kamilpackaging.com
- 13) M/s. Kashif Trading(Hi-Tech Inks)  
Mr. Kashif Abdullah  
Plot No.11-C, Khayaban-e-Ittehad, Lane-1,  
Ph-6, D.H.A, Karachi  
Phone: 021-35347571-79  
Email: kashifabdullah@kashiftrading.com  
URL: www.kashiftrading.com
- 14) M/s. Metatex (Pvt.) Ltd  
Mr. Khalid Khanani  
Plot No.S-29, S.I.T.E, Mauripur Road, Karachi.  
Phone: 021- 34533611-4  
Email: khalid@metatex.com.pk  
URL: www.metatex.com.pk
- 15) M/s. Macpac Films Ltd.  
Mr. Maqbool Elahi Shaikh &  
Mr. Ehtesham Maqbool Elahi  
Plot No. 21, Maqboolabad, J.C.H.S  
Tipu Sultan Road Karachi  
Phone: 021-111-635-111  
Email: ehtesham.maqbool@macpacfilms.com  
URL: www.macpacfilms.com
- 16) M/s. Printer Port (Pvt.) Ltd  
Mr. Jawed Butt (Jimmy)  
F-79, S.I.T.E, Karachi  
Phone: 021-32589123-4  
Email: jimmy@printerport.com.pk  
URL: www.printerport.com.pk
- 17) M/s. Printech Packages (Pvt.) Ltd  
Mr. Badar Rais & Mr. Anas Habib  
M/s. Printech Packages (Pvt.) Ltd  
F-656, Adjacent D-50, S.I.T.E, Karachi  
Phone: 021-32589204  
Email: badarrais@printechpackages.com,  
anas.habib@printechpackages.com  
URL: www.printechpackages.com
- 18) M/s. Pakistan Industrial Films (Pvt.) Ltd  
Mr. Shan Elahi & Mr. Imran Iftikhar  
Plot No:194, Main RCD Highway  
DEH Gundpass, Karachi  
Phone: 021-32593044, 0300-0204173  
Email: shanelahi@pifilms.com.pk,  
imran.iftikhar@pifilms.com.pk  
URL: www.pifilms.com.pk
- 19) M/s. Rototec (Pvt.) Ltd  
Mr. Mansoor Shaikh & Mr. Farooq Shaikh  
Plot No.E-192, North West Industrial Zone  
Port Qasim Authority (PQA), Karachi  
Phone: 021-34154022-23  
Email: mansoor-shaikh@rototec.com.pk,  
farooqfarrukh1@hotmail.com  
URL: www.rototec.com.pk
- 20) M/s. RotoPack  
Mr. Aamir Hirani  
Office: 7, E-2, Rukhsana Building, Block-7/8,  
Shaheed-e-Millat, Karachi  
Phone: 021-34550563-64  
Email: ceo@rotopack.com.pk  
URL: www.rotopack.com.pk
- 21) M/s. Saima Packaging (Pvt.) Ltd  
Mr. Yousuf Tinwala & Mr. Aleem Tinwala  
Plot.60-A, Sector-15, Korangi Industrial Area  
Karachi  
Phone: 021-355050176-9, 021-35114584-7  
Email: yousuf.tinwala@saimapac.com,  
aleem.tinwala@saimapac.com  
URL: www.saimapac.com
- 22) M/s. Six Sigma Printers  
Mr. Muhammad Rashid  
Plot-25, Sector-24, Korangi Industrial Area  
Karachi  
Phone: 021-35121256  
Email: sixsigmaprints@gmail.com
- 23) M/s. Specialty Printers (Pvt.) Ltd  
Mr. Iftikhar Allawala & Mr. Azfar Allawala  
F-159, Off; Hub River Road, S.I.T.E, Karachi  
Phone: 021-32579030-34  
Email: azferallawala@specialtyprinters.com  
URL: www.specialtyprinters.com
- 24) M/s. Sal-Im International Company  
Mr. Salman Hanif  
Mall Square, Office No.10, Zamzama Boulevard,  
Phase-V, Clifton, Karachi  
Phone: 021-35861885, 021-35878801  
Email: info@sal-im.com  
URL: www.sal-im.com
- 25) M/s. Sheeba Polybag Printers  
Mr. Ausaf Laeeq  
Office: 10, Gupta Mansion, 1st Floor, Plaza Square,  
M.A.Jinnah Road, Karachi  
Phone: 021-32726749, 32723235, 32763242  
Email: ausafalaeq@gmail.com
- 26) M/s. Transworld Multipurpose Industries (Pvt.) Ltd  
Ms. Farnaz Ahmed  
10th Floor, Tibet Centre, M.A. Jinnah Road, Karachi  
Phone: 021-32776076, 021-32735431,  
021-32720459  
Email: farnaz@tmipackaging.com  
URL: www.tmipackaging.com
- 27) M/s. Toyo Packaging (Pvt.) Ltd  
Mr. Shariq Maqbool Elahi & Mr. Habib Elahi  
F-2 A/E, S.I.T.E, Karachi  
Phone: 021-32576341-2  
Email: shariq.maqbool@toyopackaging.com,  
habib.elahi@toyopackaging.com  
URL: www.toyopackaging.com
- 28) M/s. The Engraverz  
Mr. Faizan Parvez Shahzada  
F-4/A, Behind Honda Atlas, S.I.T.E, Karachi  
Phone: 021-32584594, 021-32593288  
Email: info@theengraverz.com,  
theengraverz@gmail.com  
URL: www.theengraverz.com
- 29) M/s. Trade Polymerz (Pvt.)Ltd  
Mr. Khurram Kamran  
703, Tahir Plaza, Block-7/8, KCHSU, Near Duty Free  
Shop, Main Sharah-e-Faisal, Karachi  
Phone: 021-34312885-6  
Email: ceo@tradepolymerz.com  
URL: www.tradepolymerz.com
- 30) M/s. Universal Packaging Company (Pvt.) Ltd  
Mr. Naveed Godil & Mr. Faysal Godil  
Plot No.D-54, S.I.T.E Estate Avenue, Karachi  
Phone: 021-32594409-12  
Email: naveedgodil@gmail.com,  
faysalgodil@upco.pk  
URL: www.upco.pk
- 31) M/s. Pegasus (Pvt.) Ltd  
Mr. Aamer Khanzada  
2nd Floor, Business Centre, Mumtaz Hassan Road,  
Karachi  
Phone: 021-111-734-266  
Email: info@pegasus.com.pk  
URL: www.pegasus.com.pk
- 32) M/s. Digital Process Pvt. Ltd  
Mr. Zain Fazal  
Plot No. B-108,109,110, Sector 6-G, Mehran Town  
Korangi, Karachi  
Phone: 0333-2522212, 0333-1455577,  
0333-3802112  
Email: zain.fazal@dgproc.com  
URL: www.dgproc.com

## Members Directory (North Zone)

- 32) M/s. Al-Aziz Rotoflex (Pvt.) Ltd  
Mr. Hafiz Asif Ikram  
10-KM, Sheikhpura Road,  
Main Lathian Wala Stop, Al-Aziz Road,  
Faisalabad  
Phone: 041-32423733, 041-32423833,  
041-32423933, 041-32423633,  
Email: alaziz@alazizgroup.com,  
asif@alazizgroup.com  
URL: www.alazizgroup.com
- 33) M/s. A. H. Y. Plastic Industry (Pvt.) Ltd  
Mr. Usman Malik  
2.5 K.M. Kahna Kacha Road,  
Lahore  
Phone: 042-111-111-374, 042-35271033  
Email: info@ahyindustries.com  
URL: www.ahyindustries.com
- 34) M/s. Bin Rasheed Group of Companies  
Mr. Moazzam Rasheed  
10-Abbot Road  
Lahore  
Phone: 042-36296901  
Email: service@binrasheed.com  
URL: www.binrasheed.com
- 35) M/s. Converters (Pvt.) Ltd  
Mr. Muhammad Akbar Paracha &  
Mr. Asadullah Paracha  
24 KM Off Raiwind Road  
Near Hi-Tech Feeds Mills  
Lahore  
Phone: 042 532549-50  
Email: makbar@converters.com.pk,  
asad@converters.com.pk  
URL: www.converters.com.pk
- 36) M/s. Carvan Plastics Industry (Pvt.) Ltd  
Mr. Faisal Malik  
Factory: Begum Kot Sharak Pur Road,  
Near PSO Petrol Pump & Sui Gas Office  
Lahore  
Phone: 042-37902728, 042-32829-2930  
Email: faisal@carvanplastics.com  
URL: www.carvanplastics.com
- 37) M/s. Dynamic Packaging (Pvt.) Ltd  
Mr. Muhammad Ashraf Choudhry  
Shami Street, Raj Industrial Park, 22KM  
Off. Ferozpur Road, Lahore  
Phone: 042-35274795-98  
Email: info@dynamicpkgs.com.pk,  
ashraf@dynamicpkgs.com.pk  
URL: www.dynamicpkgs.com.pk
- 38) M/s. Ellahi Packages  
Mr. Haji Shaikh Mehboob Ellahi  
Opposite: Nayyer Carpet, GT Road  
Gujrat  
Phone: 053-3532001, 053-3534001,  
053-2108440  
Email: mehboob78650@yahoo.com
- 39) M/s. Fine Art Press (Pvt.) Ltd  
Mr. Humayun Tariq  
P-1031, G.T.S. Chowk, Railway Road  
Faisalabad  
Phone: 041-32629668  
Email: fineartpresspvtltd@gmail.com
- 40) M/s. Five Star Plastic Industries (Pvt.) Ltd  
Mr. Hafiz Muhammad Atif &  
Mr. Hafiz Muhammad Hamid  
P-19, Opposite Saim Nehar, Near Misali Public  
High School, Chak No.66 J.B, Jhang Road,  
Faisalabad  
Phone: 0300-8656070, 041-2629688-69  
Email: pentapack@hotmail.com,  
fivestarpackages@hotmail.com
- 41) M/s. Gulf Packaging (Pvt.) Ltd  
Mr. Ejzat Khan  
10.5km, Raiwind Road, Near Coca Cola Factory,  
Lahore  
Phone: 042-35320422-3  
Email: ezat@gulfpackaging.net  
URL: www.gulfpackaging.net
- 42) M/s. Iteffaq Poly Packages  
Mr. Naeem Sarwar & Talha Zia  
Kashmir Pul Main Eden Garden Road  
Opp. Madarissa Jamia Tul Saleheen, Faisalabad  
Phone: 041-38520588, 041-38520789  
Email: ipfzia@yahoo.com
- 43) M/s. Masood Plastic Industry  
Mr. Tahir Masood & Mr. Awais Ali  
896-Ayub Street, Off: Usman Street,  
Chohan Road Stop, Band Road, Lahore  
Phone: 042-37158582  
Email: masoodplastic@hotmail.com
- 44) M/s. Naeem Packages  
Mr. Naeem Ahmed Khan  
Room-4, Floor-No. 1, Jalil Center,  
231-Circular Road, Bhati Gate, Lahore  
Phone: 042-37311809  
Email: info@naeempackages.com,  
naeem@naeempackages.com  
URL: www.naeempackages.com
- 45) M/s. Panaflex (Pvt.) Ltd  
Mr. Muhammad Iqbal  
Talwandi Rahwali, G.T. Road,  
Gujranwala-52280  
Phone: 055-3881611-14  
Email: ceo@panaflex.com.pk  
URL: www.panaflex.com.pk
- 46) M/s. Pak Packages  
Mr. Shafiq-ur-Rehman  
159/A-M, Quaid-e-Azam Industrial Estate  
Kotlakhpat, Lahore  
Phone: 042-35114101-03  
Email: pakpackages@hotmail.com  
URL: www.pakpackages.com
- 47) M/s. Pak Printers  
Mr. Nouman Mehmood  
Al-Masoom Town, St-1, Back Side  
Golden Dyeing, Faisalabad  
Phone: 041-8540500  
Email: nauman@pakprinters.com  
URL: www.pakprinters.com
- 48) M/s. Pakistan International Printers (Pvt.) Ltd  
Mr. Saad Haleem  
5.3KM, Raiwind Road, Holiday Industrial Estate,  
Feteah Abad Road, Lahore  
Phone: 042-35324061-4  
Email: saad.haleem@hotmail.com
- 49) M/s. Paracha Chemical Industries  
Mr. Shahzad Mushtaq Paracha &  
Mr. M. Asif Paracha  
Chak No.67, J.B. Sadhar, Jhang Road  
Faisalabad  
Phone: 041-2558047-8  
Email: parachachemicalind@gmail.com,  
info@parachagroup.com  
URL: www.parachagroup.com
- 50) M/s. Roshan Packages Ltd  
Mr. Saadat Ejaz  
Head Office 325-G/III, M.A. Johar Town  
Lahore  
Phone: 042-35290734-37  
Email: saadat.ejaz@roshanpackages.com.pk  
URL: www.roshanpackages.com.pk
- 51) M/s. Rainbow Printing Solutions (Pvt.) Ltd  
Mr. Shaikh Naeem Ahmed  
Bahawalpur Road near Rescue-1122  
Multan  
Phone: 061-36243454, 041-34233939  
Email: minute.observer3044@gmail.com,  
rainbowpackages@live.com
- 52) M/s. Sprintech Packaging (Pvt.) Ltd  
Mr. Mujahid Ali Shaikh  
Sprintech House, Farooq Industrial Estate,  
Galxo Town, Anam Road, 20-Km  
off. Ferozpur Road, Lahore  
Phone: 042-35272075-79  
Email: ali.sprintech@gmail.com  
URL: www.sprintech.com.pk
- 53) M/s. Speed Packages  
Mr. Adil Khan & Mr. Shahid Saleem  
Sunny Biscuit Factory, Sunny Road  
Daroghawala, Lahore  
Phone: 042-36541930-31  
Email: adil@speedpackages.com,  
shahid@speedpackages.com  
URL: www.speedpackages.com
- 54) M/s. Shaheen Printers  
Mr. Mansha Umar  
P-1, Street No-1, Odeon Street, Sammudri Road  
Faisalabad  
Phone: 0320-9666214  
Email: mansha\_22@live.com
- 55) M/s. SMS Chemicals  
Mr. Hafeez Ahmed  
Office No.06, 5th Floor Tele Tower  
Link Road, Model Town, Lahore  
Phone: 042-35447360  
Email: Info@smschemicals.com  
URL: www.smschemicals.com



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**Web: [www.hitechinks.pk](http://www.hitechinks.pk)**

**Office: +92-21-35347571 & 79**

**Fax: +92-21-35347579**