Sanjeev Taneja, President & Managing Director, Evonik, India discusses the trend towards use of environmentally friendly coating systems and plans for the India market. He also focuses on the development in the coatings raw materials segment.
Global trends in the industrial coatings industry.

Evonik is the creative industrial group from Germany and operates in 3 segments - Nutrition and Care, Resource Efficiency and Performance Materials and Paints and Coatings is one of the important sector for Evonik in India and also globally. With regards to the trends and development in the industrial coatings industry, in the industrial coatings market, the main trend continues to be the shift towards environmentally friendly coating systems, e.g. waterborne, high solids, powder coatings or direct-to-metal applications. In the automotive coatings sector, trends include the move towards fewer coating layers and lighter coat-weights for cost savings and improved fuel efficiency.

Whereas, in the printing inks market, publication and commercial printing is decreasing however in India we are observing a moderate growth while the packaging sector is growing. On the technology side, digital printing techniques are making their way into traditional printing inks sectors with very high growth rates but are still limited in overall shares. One of the growth drivers is again the packaging sector while the plastics packaging sector is facing public awareness of environmental concern.

Development in the coatings raw materials segment.

For coating raw materials, the main trend is focusing on greener chemistries, meaning bio-based and renewable materials. In addition, raw materials that allow easier processability (like easy-to-disperse pigments or rheology control agents) are making their way into the coatings market. For the inks market, the industry is showing greater awareness about the environmental impact of printing inks, especially in packaging end-applications. Therefore, the demand for raw materials in accordance with distinct regulations and guidelines like FDA, China GB, Swiss Ordinance, BfR (the Federal Institute for Risk Assessment), Nestlé is increasing globally.

In terms of supply, we notice a slight improvement on the raw material side that has been a big concern in 2018, e.g. the shortage of a critical precursor of photoinitiators leading to major price increases and difficulty in keeping up with demand for coatings and UV inks. This is closely followed by pigment supply, where global capacity has been affected by plant closures in China. Also, the supply situation for additives has eased in the past months.

Sectors seeing increased demand for coatings solutions.

We clearly see an increased demand across the industry, i.e. industrial applications in general, automotive as well as architectural coatings. While the automotive industry currently shows only moderate growth, a stronger demand exists for highly innovative automotive coatings for the next generation of vehicles. For example, ride-sharing models and autonomous driving will require more sophisticated solutions in respect to easy-to-clean, anti-scratch, or anti-microbial coatings. Evonik Coating Additives has been focusing its R&D-activities on these trends and developed a broad portfolio of additives to enable coatings manufacturers to meet these challenges.

For multi-national printing inks producers, we see a general trend towards global formulations to reduce complexity and increase flexibility within production. To balance this with increased customer demand for individualized products, modular inks production is fostered where possible. Ink additives that support a broad variety of final end-applications in different solvents and systems are highly requested.

Move towards waterborne systems for coatings solutions.

Many coatings applications and market segments are attempting to move towards waterborne technology, high solids, and/or powder coatings, with right infrastructure in place like drying and curing equipments, complete waterborne solution is achievable. From an Indian context, in future, with government regulations in place, the shift to waterborne coatings will be faster.

In recent years, the Chinese government has been enforcing the shift towards waterborne technology, e.g. in case of container coatings; this trend will make its way into other market segments such as wood coatings.

In printing inks, the trend towards waterborne systems is also ongoing and rarely are new innovative ink formulations developed for solvent-based systems. However, countries like India are still using a lot of solvent based systems. In case of gravure inks, the solvent borne systems still enjoy a major share.

Use of nanotechnology to enhance coatings solutions.

The former “hype” of nanotechnology seems to be gone; customers hardly ask directly for “nano” anymore. Instead, they ask for functionalities and solutions to their problems, which nanotechnology in fact can often deliver, e.g. anti-microbial functionality. Evonik Coating Additives has been supplying the coatings market for decades with nano-structured fumed silica AEROSIL™ to control the rheology of coatings systems and to provide secondary effects like improved corrosion resistance or enhanced scratch resistance. In addition, the product portfolio comprises nanocomposites for UV cured formulations (e.g. NANOCRYL®) to enhance the performance of coating systems.

Smart coatings and its demand by various industries.

Functional coatings are increasingly in demand with functionalities such as dirt pick-up, air purification, anti-microbial effect - for ex. for medical applications in hospitals. We expect a strong demand in the automotive sector, in particular for coatings enabling autonomous driving like sensor coatings.

Coatings requirements for developed vs emerging markets.

Coatings need to have the right cost/ performance ratio. Over time, the quality requirements will be very similar in emerging regions as compared to more mature regions. The performance needs and requirements will become more and more comparable also driven by export business from emerging regions to North America and Europe. In printing inks, growth rates are expected to show rapid development in emerging markets. The demand is driven by fast growing packaging sector which is dominated by transplants or import business of global and multinational inks producers.

Plans for the India market.

The expected GDP-growth in India of approx. 7 percent for the coming years is now outpacing the rest of Asia, therefore offering interesting opportunities to expand the coating additives business. Of course, we have been developing concrete plans and measures to further improve our market positions in all relevant sub-segments of the coatings and inks industry. We are going to follow our philosophy to be close to customers and offer an attractive portfolio of coating additives combined with a high level of technical support in order to develop solutions according to the customer and market needs.

Focus regarding R&D and innovation for coatings segment.

Evonik Coating Additives has always developed technologies that serve an
enabler for next coatings and ink generations. Being very close to customers, we continuously aim to capture the market needs ahead of time. For example, we are working on a novel technology for dispersing additives that fully prevents sedimentation during storage or transportation of slurries. As a result, the expensive and time-consuming cleaning and maintenance procedures of tanks can be avoided. We have been able to launch a broad variety of new products at the European Coatings Show in March this year, e.g., superwetting surfactants DYNOLOY® 960 and DYNOLOY® 980; a universal and cost-effective dispersant TEGO® Dispers 679; a broad range of defoamers and wetting agents for food packaging inks; and also a new matting agent ACEMATT® 3400 for applications requiring high transparency and soft-touch properties. These are just a few examples of our most recent product launches.

Another good example of being close to customers is our new innovation hub in Singapore, established in 2018 with the clear aim to identify specific innovation needs and strengthen the product development according to the regional customer requirements.

Our coating lab in India is equipped with most advanced equipments and experienced Coating and Ink experts to help the formulation requirements of our Customers in India. Our experts are also developing Innovative solutions to satisfy India specific requirements in co-ordination with regional and Global R&D team.

We have increased the focus on developing and hiring local talent to ensure Evonik is not just recognized as an important supplier but also an attractive employer in the region.

Implementing sustainability concepts in the coatings segment.

Today in the chemical industry sustainability is closely linked with corporate strategy and it is an important element of responsible business. At Evonik, sustainability is a growth driver for many of our businesses. We defined six areas of action based on balanced management of economic, ecological and social factors. These six areas are: strategy & growth, governance & compliance, employees, value chain & products, environment & safety. Our responsibility extends along the entire value chain from upstream within the supply chain and right through to downstream by enabling customers to reduce their ecological footprints.

Evonik’s sustainability analysis includes an extensive analysis of the contribution made by our products to improving resource efficiency in their respective applications. This covers energy savings and the reduction in greenhouse gas emissions, water consumption, and the use of raw materials. The results confirm that, based on 2016 data, around 50 percent of the sales generated by our chemical segments already come from products that make a measurable contribution to improving the resource efficiency of their applications.

Trends related to polyurethane - a coatings raw material.

Polyurethanes are the key to many eco-friendly coatings solutions. Polyurethane crosslinkers improve significantly the performance of 1K/2K high solids, waterborne, or powder coating systems. They are especially beneficial in the field of resin modification, e.g., modified resins that can be used for UV curable coatings, high-solid urethane modified acrylates or waterborne polyurethane dispersions. These products have conquered a variety of new applications beyond the traditional leather & textile coatings. The penetration of PU in India is lower compared to other regions. With the regulations in place, environmental friendly Polyurethane technology will be a key solution provider to serve this trend.

Challenges faced by the coatings manufacturers globally.

Regulations such as REACH as well as an increasing number of national standards will require a high focus and investment for all coating manufacturers and raw material suppliers. The ongoing consolidation of the coatings industry results in an increasingly and highly competitive environment, in particular for small to mid-sized companies. Therefore, it will be key to ensure compliance and control manufacturing costs at the same time.