World Of Chemicals
www.worldofchemicals.com

December 2016 | Volume 1 | Issue 7 | ₹200

CHEMICAL TODAY

Connecting World Chemically

Sector View
Paints & Coatings

Feature
Water Treatment

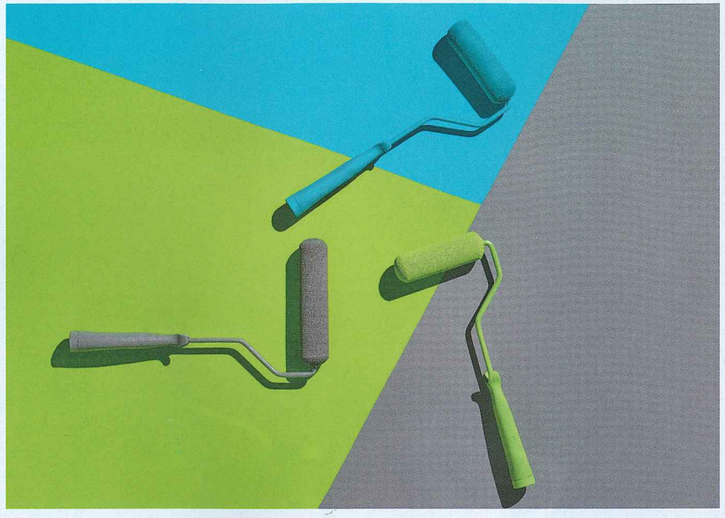
IT In Chemicals
Internet Of Water

Equipment
Valves Automation
Valves Interview

QUANTIFYING, SIMPLIFYING & GRATIFYING THE PAINTING EXPERIENCE

Dr Prachur Bhargava, Coatings Global Marketing and Strategy Manager, Ashland, delves into the rapidly changing global dynamics of architectural paints and coatings and the ways in which the industry is working to meet the customer demands.

BY DEBARATI DAS



Global trends and development in architectural paints & coatings.

There are two key trends which are currently driving the architectural coatings around the world.

Low-VOC paints: Regulations in regions like Europe and the USA are becoming increasingly strict, making low-VOC paints the norm. Apart from this, numerous paint companies are voluntarily adopting "green labels" and, thus, are turning to low-VOC paints.

Simplifying the painting process: Most paint manufacturers are trying to make painting a faster, easier process for the end user. Currently, the trend is to have products that combine several functionalities into one step. So, instead of applying a primer and then multiple layers of paint, new products combine all these steps in just one application. There is also a growing trend toward one-coat hide paint, particularly in North America, and is fast being adopted in other regions. Paint manufacturers are working towards reducing the time needed for finishing the painting process.

The other trends revolve around making paints with antimicrobial properties, eco-friendly paints, and asthma/allergy-friendly paints.

Changing dynamics of new age paints & coatings with Nanotechnology.

Many well established paint technologies had nanotechnology built into them. For example, binders in traditional paints are nano scale. Today, there are two main areas where nanotechnology is actively being used:

Repel dirt and create a self-cleaning effect: Nanotechnology is being used to make a super-hydrophobic surface that repels dirt. A growing number of exterior paints feature some form of this technology.

Paints with self-healing capabilities: This is mostly being used in automotive coatings, where a scratch on the car surface can repair itself. Some companies have already commercialised this technology.

Sectors with growth potential in emerging markets.

In the overall paints and coatings industry, water-borne coating is the fastest growing segment in the emerging regions. Even in industrial coatings, where water-borne coatings are currently a small sub segment, we are observing a growing trend moving away from solvent-based coatings. In water-based architectural coatings, the premium paint segment is showing the highest growth. This is the segment where paint durability, paint appearance, etc. needs to be the best in class. This is a challenging segment for manufacturers because there are many tough requirements to be met. But this segment is also witnessing tremendous growth, especially in emerging markets, where the disposable income of the middle class is rising and they are demanding such premium paints.

Key drivers of growth for paints & coatings market.

The global architectural coating industry is driven by mainly four factors:

- Consumer demand: This, in turn, depends on the state of the economy, which impacts consumers' disposable income.
- Product quality: Durability, quality, appearance and other paint properties such as dirt repellence, environmental friendliness and such have a major impact.
- Manufacturing cost efficiency: Manufacturers are constantly trying to make their operations more and more efficient with better raw materials, paint manufacturing equipment, etc.
- Environmental regulations: This is the key driver today as manufacturers have to change their processes to match changing regulations and a constantly revised list of banned or regulated chemicals.

New age consumer demands for paints & coatings solutions.

People are demanding a wider choice in colour, texture and appeal. Instead of plain walls, people want textured paint and special appearance paints. In Europe and the US, where the demand for DIY paints is high, customers want paints that dry quickly and are easy to apply, making the whole painting process simpler.

Asia Pacific, however, is a different story. Unlike the DIY market in the US, painting in Asia is a contract job. It is not done by the customers themselves, but is given to professionals. Over the years, labour cost has gone up and there is a lot of emphasis on getting the job done faster.

Customers also demand paint longevity, but that can be impacted by climate variations from region to region, so it's very difficult to achieve uniformity across the entire Asia Pacific region. With growing competition, many manufacturers are offering warranties on their paint. These are challenging factors to be met.

In terms of appearance, the demand for multicolour and textured paint is also growing in Asia Pacific, particularly for exterior applications. These are paints that give the look of granite or marble or other natural stone surfaces. Such paints are more cost-effective than real marble or granite walls and can be easily applied.

Challenges that impact the growth of paints & coatings market

When the construction market is booming, it triggers growth for the paint and coatings industry. But when the construction market goes down, it has an impact on the paint and coatings industry. The paint and coatings industry has to constantly deal with these kinds of changes.

Also, changing regulations give rise to both challenges and opportunities. Ashland continually works with customers to ensure the integrity of their products, developing advanced chemistries and formulations that help customers solve their most difficult regulatory challenges.

Overview of company's paints & coatings business.

As an organization, we are passionate, tenacious, solvers who thrive on developing practical, innovative, and elegant solutions to complex problems in applied chemistry. Our teams are always pushing the boundaries of what's possible and advancing the competitiveness of our customers across diverse industries.

Our people are distinguished by their ability to create and apply specialized chemistry in ways that enable customers to amplify the efficacy, refine the usability, add to the allure, ensure the integrity, and improve the profitability of their products and applications.

The company has been helping to solve our customers' challenges in rheology modifier technology for more than 50 years. We have three flagship product lines –Natrosol™ HEC, Natrosol™Plus HMHEC and Aquaflow™ NSAT.

Natrosol has been the world's leading brand of cellulose thickener for more than half a century. It provides rich in-can feel, and reliable and cost-effective thickening to a wide range of paints, which can help manufacturers improve their profitability. Our next-generation thickener, Natrosol Plus HMHEC, provides excellent application feel, spatter resistance and superior application hide, improving the efficacy of formulations. Aquaflow NSAT improves the allure of paint formulations by providing excellent flow and levelling, application hide and smooth finish to premium paints, a segment where performance demands are high.

The group also offers Strodex™ and Dextrol™ phosphate ester surfactants and the Drewplus™ line of foam control agents. We have manufacturing facilities situated globally in Asia Pacific, Europe and North America, which helps us meet the growing customer demand.

To enable our customers to amplify the efficacy, or refine the usability of their formulations, Ashland has a footprint across the globe which includes Centres of Excellence in the US, Netherlands, and India. In addition to these centres, we have technical service centres in China, Brazil and Mexico. Helping customers minimise dripping or sagging paint adds to the painting process application and ultimate allure once the paint is dry.

Growth prospects in Asia Pacific region.

As an organization, we have a strong presence in Asia and rigorously support the growing paints and coatings industry in the region. Our manufacturing facilities are located in China and have operations in India. Recently, we expanded our coatings Centre of Excellence in Mumbai to support the Asia region. We also have a technical centre in Shanghai that caters to the greater China region. The organization is well positioned to support the growth in this region with a diverse portfolio of products specially customised to meet the demands of Asia Pacific customers. We have a global R&D team which supports innovation for the Asia Pacific region.

Company focus on R&D and innovation.

Recently, the company took another important step in our plan for the future, furthering our competitive strategy and revealed our new "Always Solving™" corporate identity along with unveiling the organizational culture that will continue to differentiate the company as we continue our mission to become the premier specialty chemical company in the world.

We have enhanced our research and development department to further increase our focus on- and impact of new products. Under our strategy we have a well-defined process for vetting robust projects for new product and technology development.

For example, Natrosol Performax™ HEC is a patent-pending cellulose thickener that helps paint manufacturers improve the efficiency of their paint-making operations. It helps improve cycle time, throughput, raw material costs, energy usage and such. These improvements can significantly impact the manufacturer's profitability.

In the recent past, we launched Natrostone™H30 rheology modifier that helps manufacturers create alluring finishes, which look like expensive natural stone, such as marble and granite. Stone paints made using Natrostone H30 rheology modifier can be sprayed on and have properties such as water whitening resistance, good sprayability and storage stability of stone-like paints.

We have introduced low-VOC products especially for the Asia Pacific market, including Aquaflow NLS nonionic synthetic associative thickeners and Aquaflow XLS nonionic synthetic associative thickeners. Low-VOC paints are relatively new for this region so our products actually help paint manufacturers formulate these types of paints and meet the low-VOC trend.

In addition to products, we also develop test methods that enable the industry to develop new and better paints. One such example is the patent-pending Application Reader Technology (ART) device, which actually quantifies the painting experience. It can be hooked onto a paint roller and it reads the forces, the length of painting strokes, and many other factors to quantify the process. It helps compare various paint formulations and takes the subjectivity out of trying to describe the painting experience.