

Two questions, two answers:

- 1** What have been the most important changes in customer demands for protective coatings in recent years?
- 2** What technical developments in protective coatings do you expect for the next five years?



1 Change in the protective coating market has been driven by three inter related factors, regulations / environmental, health and safety (EH&S) profile of products, performance and total cost over the life of the product. On the first point we have an increasing demand on two fronts. Regulations as we all know continues to become more stringent and the cost to register new substance is a factor influencing new product development and introduction. We also have an increasing demand to help our customers find solutions to replace tried and true raw materials that deliver excellent performance but now have non desirable labelling and EH&S profiles. These demands are true for multiple geographies with Europe, China taking the lead in driving change. Both these demands are important to both suppliers and users as we strive to be good stewards, the challenge is balancing regulatory and EH&S demands with the requirement for high performance in increasingly harsh environments.

Protective coatings have always been known for their ability to perform in a large range of harsh environments with considerations from application to in-service environmental conditions. The third point is the total cost of

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Marcus Pfarherr
Technical Manager
Blue Cube Germany
MPfarherr@Olin.com



Marie-Josée Déry-Chauvette
Global Strategic Marketing
Associate Director
Olin
MChauvette@OlinBC.com

the life of the product. More and more the industry has to view the cost of a solution over the life time of the product weighing the pros and cons of the up-front cost of the product, application and longevity of performance in making decisions for selection. The value of course is in the eye of the beholder and their specific situation. We are finding that the industry is more open to collaboration to find solutions than in the past and this is a positive step to finding the sweet point between these three interrelated drivers in our industry.

2 Asia will continue to drive low volatile organic compound exposure with China leading the way given the large demand for protective coatings in a variety of end applications. This will increase the demand of well publicized water-borne systems driven by the container market and improvement in technologies such as high solids and powder for other applications which require robust performance and application condition flexibility. Europe and North America will drive the need for substitutes of raw materials as regulations and consumer / end user demand for improved EH&S profiles increases. We are seeing proactive behavior on the part of formulators as they anticipate potential need for substitution of higher risk materials. It is well known that new solutions are rarely an overnight fix and the time required to prove technologies is a factor in new product adoption. **3**

Book tip

Anticorrosive coatings

Jörg Sander, 216 pages, July 2010

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1 Main factors affecting customer demands in the segment of protective coatings are optimisation of application processes, top quality and lower costs. In other words, coatings should last longer but allow faster workability and faster return to service. Longer durability demands were recognized also by new ISO 12944 standard where new durability range was defined - very high durability - durability for more than 25 years. Products with excellent weatherability, faster curing speed combined with long pot-life, enable customers to apply coating systems faster and more efficient without compromising the performance. These demands led to the development of high-performance direct-to-metal technologies that enable reduced number of layers as well the time needed for painting and curing process. Additionally, global customers require protective coating solutions that are available all around the world under the same quality, followed by perfect service support regardless of the location.

2 Growing awareness about the importance of reduced environmental footprint supported by changes in environmental legislation is one of the main drivers of innovation in the coatings industry. Even though water-borne protective coatings have been constantly improved and are performing well in certain applications, they still do not perform well in severe environments. Therefore,

Event tip

EC Intensive - Anticorrosive coatings
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Dietmar Jost

Chief Officer for Industrial Coatings
Helios
dietmar.jost@rembrandtin.com



Karla Rončević

Executive Director R&D Coatings
Helios
karla.roncevic@helios.si

they cannot meet the durability properties of solvent-borne protective coatings. This is the main reason why in the protective coatings segment, solvent-borne coatings still dominate the market. We expect that this will continue in the near future as well. Besides further development of water-borne coatings, we expect that the focus of protective coating producers will shift to development of ultra-high solids and low-VOC technologies. Low-VOC technologies enable increased throughput and ensure the sustainability of liquid coatings for the next generations. Another important driver is legislation regulating health and safety. Namely, some important raw materials used in protective coatings have already become listed as substances of very high concern or will most likely be soon. That is why coating producers are already in search of new solutions that allow the same level of protection and durability. High-solids isocyanate-free durable topcoats are being investigated and will be the topic for the years to come. The development in epoxy coatings is highly driven by the legislative requirements as well. Some of the important chemicals used for production of epoxy coatings are phasing out, limiting the availability of raw materials that can be used in Europe. **◀**

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