

A stronger platform for us all

AkzoNobel recently released its new generation of coatings for the internal protection of three-piece food cans. Alex Fordham recently visited the company headquarters in Amsterdam, The Netherlands, to find out the potential benefits for the three-piece food can market



At last year's (2017) *Asia CanTech* in Bangkok, one of the questions during the Candid Forum session was of whether the industry would see the death of the three-piece can in the not too distant future. When speaking with AkzoNobel's global food segment team leader for packaging coatings, Luc Viardot, it quickly became obvious that this isn't a view that his company shares. On the contrary, in fact:

"I can understand the debate, but if you look at the figures and data, and the number of consumed food cans in world, then it's for sure that three-piece cans play a key role within the food can segment," explains Viardot. "They play a key role due to food protection; three-piece is the best."

"Don't forget to look at the customer landscape when examining the three-piece issue; most of the larger can makers have an interest in running three-piece lines because the highest number of lines we have and the flexibility in terms of size and shapes for food cans today is in this sector. This explains the growth forecasts for the next three to five years; there is forecast to be a one to two per cent growth in the three-piece can sector overall."

Viardot shares with *CanTech* that the company holds a large global market segment for food coatings for three-piece and easy-open ends. Viardot notes that the fragmented nature of the food sector means that it's a challenge to maintain this market share, especially considering the tough competition in the coatings market, and notwithstanding the BPA topic.

"Food is a fragmented market, with lots of different requirements and customers," says

Viardot. "There are key global, regional and local players in this market. We have a strong position in the food business in many different regions, especially in Europe and Asia where we grew up. With changing requirements in the industry we have had to change – not only with our technologies, but with our mindset too."

"Being a leader in this industry, moving from one type of technology to another also means that you have to take many parameters into account to make sure you meet your customer's requirements to maintain or even increase the market share we have."

VITALURE G2 10

Chief in the strategy of maintaining that market share on the three-piece side is AkzoNobel's Vitalure G2 10, said to be a new generation of coatings for the internal protection of three-piece food cans and ends. This new internal coating is said to ensure a strong technical performance, with a chemical composition to rival any epoxy and fulfilling all the regulatory requirements needed.

"Our objective was to develop a solution with a barrier performance better than epoxy technologies, while eliminating materials of concern, including of course BPA," says Viardot. "We aimed to provide our customers with a stronger platform in terms of chemical resistance for many types of food via a solution which can be used in multiple regions across the globe. This technology already has a proven track record in terms of application and chemical resistance in different regions."

"Our customer requirements are very different across the metal food can business and we strive

to bring global solutions that can be adapted to meet regional and local needs. We developed this platform together with our customers; we value their input at each stage of the project.”

THE ‘ELEPHANT IN THE ROOM’

In terms of BPA, Viardot believes the challenges the company has faced in the past few years has only made it stronger as a result. With other issues dominating the headlines, including chrome-free and the UK’s stand-off with China over waste disposal, he believes the industry has finally started to focus on solutions rather than the issue.

“BPA was a huge challenge before 2015, and continuing until 2017, but it’s interesting how much we have learnt from it,” he says. “It has only made the industry stronger – it’s meant we have had to have everybody investigating new technologies, different technologies, with different equipment and competencies.

“We continue to believe that the coating is safe, but we are working to remove it in response to customer concerns. If you look into other packaging businesses – for example plastic and glass, they are also having their own set of issues. So BPA is not unique to the metal can, it’s happening in all types of flexible packaging.”

For Viardot, he believes that the time for talking about the issue is over, particularly considering that the new range of epoxy-free coatings compare favourably in terms of performance.

“Our customers, when they were talking about BPA NI, were comparing, epoxy an old man with lots of experience, to new coatings, the young child,

who was learning how to walk, but with potential.

“It’s impossible to come with up with technology within five years that is going to be better than technology that has been in the marketplace for 40 years.

“Vitallure G2 10 is a good example of this. When looking at performance, our technology performance feedback is impressive – you can make coatings which have same the chemical performance as an epoxy. That’s with fulfilling regulatory requirements of course.”

“For us it’s about being a leader in this segment by bringing the right solution. The food can market is a huge segment to us, and if you want to protect it, you need to behave in a sustainable way.”

THE FUTURE

Alongside his view on the new generation of coatings, Viardot’s vast experience of a variety of different packaging sectors has meant that he has some interesting views on the state of the metal packaging industry currently. He concludes:

“The can maker and the other players in the marketplace from the metal packaging industry aren’t AkzoNobel’s main competitors; our main competitors are plastic and the other forms of flexible packaging. This industry needs to find a way of cleverly promoting the advantages of the metal can.

“Using sound chemistry and making the right choices now, we will ensure that the metal can, an infinitely recyclable and sustainable package, continues to be the package of choice in the future.”

Vitallure™ G2 10

Vitallure G210 is a high barrier performance and sulfur resistant platform outperforming epoxy platforms for 3pc cans. Using a green coating with less material of concern meeting regional requirements across all geographies.

Specifications

- Solids: 44%
- Film Weight: low-medium aggressive with one coat 6-8gsm, for high aggressive as base coat 6-7gsm and top coat organosol 9 gsm
- Viscosity: 45-75 sec ISO 6 at 25°C
- Stoving: 200°C from 0 to 11 minutes peak

Key Features

- Strong technical performance. Chemical resistance beyond to current epoxy coatings
- Less material of concern
- BPAfree, Styrene free, no isocyanate
- Already fully EU and FDA compliant
- Very good adhesion to AkzoNobel BPAfree powder side stripe adhesion

Customer Benefits

- Safety and sustainability: best barrier performance coating ever for food
- Avoid current materials of concern (no intentionally added BPA, melamine, styrene, isocyanate and PVC), Formaldehyde < 0.1%
- Use raw materials which are fully EU and FDA compliant
- Secure of supply: home made resin



-  High barrier performance and sulfur resistance
-  Global platform meeting regional requirements across all geographies
-  Environmentally-friendly coatings, BPA non-intent

