

New alternatives for aluminium heat seal lacquers

For those companies looking for safe and sustainable alternatives to vinyl chloride and other solvent-based lacquers, **Paramelt** has developed a new range of fully aqueous products.

Recent surveys highlight growing consumer expectations over food safety and product sustainability concerning packaging. Some reports suggest that these factors will outweigh cost as the key driver in packaging specification during the coming decade. Paramelt has continued to develop its Aquaseal range of water-based heat seal and barrier coatings in order to meet these expected demands.

One area of market concern relates to the use of solvent-borne, vinyl-based lacquers in a range of packaging applications. Vinyl chloride is one of the few materials regulated on a pan-European basis for all packaging substrates on account of its negative toxicology. In addition, PVC continues to have a negative environmental image linked to potentially hazardous air and water emissions. The presence of residual solvents in these lacquers can also have a detrimental effect on organoleptic properties and food safety.

This combination of factors is driving an increasing demand from food producers and the retail chain to move to new solutions.

Diverse applications – comprehensive range

Vinyl lacquers find wide-ranging applications including lidding foils for mineral water, juices and dairy products, confectionery and chocolate foils, bouillon cubes and processed cheese portions, as well as general use in slip and release lacquers.

To match these diverse requirements, Paramelt has turned to the flexibility of the Bluewave platform from Dow. This technology enables the dispersion of a broad range of thermoplastics directly into water. By this route, it is possible to match the functionality and diversity of vinyl resins while avoiding the related environmental and food safety issues.

Choice of the right polymer system delivers the required adhesion and sealing characteristics. However, careful attention must also be given to runnability issues, not only at the coating stage, but also on the final packing line. Paramelt has developed a flexible, tailored range of Aquaseal products to allow the replacement of solvent-borne lacquers across the many existing applications.

Technology adoption: challenges

Despite the general desire among brand-owners, retailers and consumers to move away from vinyl chloride-based, solvent-containing lacquers, conversion to date has been relatively limited.

At one level, the inherent structure of the supply chain can block progress. Most often, the innovation pipeline tends to

Paramelt products offer the functionality of vinyl resins without the related environmental issues.



come directly from packaging suppliers. With significant industry consolidation over recent years, the balance has logically tipped towards new business and cost reduction ahead of product improvement projects.

Packaging specifications are generally established to control the consistency of an existing solution and not the functional requirements of the material. This often makes it hard for the converter to sell a new solution against existing specifications.

Sometimes, the existing converter base does not have the necessary process capability to adopt the new technology. It then becomes a triple challenge for a new converter to try to enter a new market sector with new customers while bringing a new technology approach.

Often, the benefits of new technologies are primarily for the brand-owner or retailer. Implementation at the converter requires significant investment in resources with little perceived advantage in terms of costs or profitability. For suppliers, it can therefore be difficult to establish an effective route to introduce and implement these new approaches.

Aquaseal: a novel and exciting technology

To address these challenges, Paramelt is working in partnership with a number of end-users and converters to validate and implement this novel and exciting technology. Building on this experience, it is able today to offer a range of cost-effective, solvent and chlorine-free packaging lacquers for aluminium foil. ■

Further information

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