

Meet the challenge of food contact compliance

The regulatory environment for printing inks that come into indirect contact with food is continually changing, while ultraviolet curable inks and coatings are winning market share in the food packaging market. **RAHN**, a leading supplier of ultraviolet light and electron beam raw materials, explains how manufacturers can negotiate the regulatory minefield.

Many UV-curable inks and coatings manufacturers as well as converters are facing the challenging task of formulating and converting systems that are suitable and compliant with current and upcoming legislation.

The biggest challenge for an ultraviolet (UV) and electron beam (EB) raw material supplier such as RAHN is that there is not one defined set of rules, but instead a variety of heterogeneous international and local legislation, guidelines from industry associations, and positive and negative lists from brand-owners that are imposed upwards in their supply chain.

An inconsistent set of rules

Until now there has been no specific regulation in Europe as far as food packaging inks and coatings are concerned, with many companies referring to the European Plastics Directive for guidance on raw materials and migration limits. Other useful guidelines on raw material selection and process requirements have been provided by the European Printing Inks Association (EuPIA). Only recently has Switzerland introduced the first and specific legislation for food contact inks and coatings with positive lists of permitted raw materials that can be used, together with migration limits for each substance. A similar concept in Germany may come into force in 2015.

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In addition, US laws are not comparable to European concepts. Acknowledging that UV-curing systems were generally fit-for-use, the American Food and Drug Administration approved several UV/EB raw materials for direct food contact as specified in Food Contact Notification 772.

As a raw material supplier, RAHN has to take into consideration other uses of its products and their specific regulations, such as directives related to toys and cosmetics. An additional level of complexity is then introduced by downstream brand owners of fast-moving

consumer goods. Many large food companies have their own raw material lists that can or cannot be used in their packaging inks – again, these lists are not always congruent with the aforementioned legislation.

What raw material manufacturers can do

The balancing act for a UV/EB raw material supplier such as RAHN is that the one-size-fits-all approach to product development and design is history, but on the other hand a rapidly expanding product line with small volumes per item will never be economically feasible. The company sees three main areas where it can be active in order to support the needs of its clients:

- **Design low-migration products:** RAHN has been an early mover in the field of polymeric photoinitiators. The company's range of GENOPOL* products has been specifically designed to exhibit the lowest-possible potential for migration and has an ongoing programme aimed at improving product purity levels and introducing further product categories such as resins with favourable food contact characteristics.
- **Perform safety assessments:** RAHN has invested in toxicological evaluations in compliance with proposed European Food Safety Authority (EFSA) tests to scientifically support its products. In order to perform a safety evaluation, a certain degree of sophistication is required when it comes to the definition of test methods, detection limits and quantitative analysis of test results.
- **Cooperation with authorities and industry:** RAHN has participated with other suppliers in a European Chemical Industry Council (CEFIC) initiative together with EuPIA to prepare food contact dossiers for specific acrylate diluents and resins. In these dossiers tox data as well as real-life migration data has been presented to the Swiss authorities to achieve a listing on the Swiss positive list. Under the umbrella of the RadTech Europe organisation, a similar initiative is planned for a selection of photoinitiators.

All these activities require investments and the application of serious manpower and expertise. However, it is in the best interests of our industry to cooperate on all of these issues and to provide the highest level of safety. ■

Further information

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