

Food-safe inks growing in response to regulations

To ensure food safety, low-migration inks and coatings are increasingly being used to print food packaging in order to meet new regional and national regulations.

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Food packaging will grow at a faster rate than the overall packaging market from 2016 to 2021, at a 3% CAGR in real value and print area. Food-safe inks will also grow at a fast rate in the coming years, as pressure from brand owners and regulators sees them adopted in larger amounts of food packaging. That's according to a new report from Smithers Pira, "The Future of Printing for Food Packaging to 2021."



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Says the report, special food-grade inks are increasingly used in printing for food packaging to ensure there is no contamination of the product when they are used correctly. In 2016, the market was over 250,000 tonnes costing \$1.83 billion, with growth prospects ahead of the general food packaging market growing at 6% annually in volume terms to 2021 as the use of food-safe inks is adopted. The value is growing at a higher rate, showing the high cost of these

materials, which is why many converters do not use them; but this is changing following pressure from brands, and growing regulation of food safety from regional and national governments.

Says report author Dr. Sean Smyth, "Food packaging developments are driven by consumer preferences, which are making brands and retailers change and refresh their offerings. Safety concerns override these trends, and have to fit in with pressures to make supply chains increasingly sustainable. This may work against safety, as work to minimize packaging materials may downgauge a barrier film, for example, making it less effective at protecting the contents."

Food may be contaminated by migration of printed material through diffusion, setoff from a printed surface, or during use, particularly when a product is cooked at high temperature, explains the report. Food-safe low-migration inks or coatings will release levels below the accepted levels of contamination when they are properly applied and dried after printing. Using the appropriate materials is important, and following good manufacturing processes to demonstrate compliance and minimize the risks is the direction the packaging industry is taking.





Food consumption is also changing. The traditional model of large weekly shopping trips for families to sit down together for meals is becoming more rare, as household occupancy falls and new habits occur. Snacking is beginning to become a major trend among consumer groups accounting for 50% of all food and beverage consumption in the U.S., according to research from the Hartman Group published in 2016.

For packaging this means a reduction in the pack size, with more samples and designs to facilitate consumption on-the-go, and the package is increasingly acting as the serving method. This puts additional stress on the potential of migration as the consumer touches the outside of

the pack as part of the eating or drinking activity. This is driving the adoption of resealable pouches and flexibles. This results in packaging being handled more during use, meaning there is less distinction between food contact and indirect packaging. Thus all food packaging has to be produced with reducing contamination risk as part of the design.

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