

ISSUE BRIEFING
UV INKS AND COATINGS FOR FOOD PACKAGING
JULY 2009



- AT ISSUE:** use of UV Inks and coatings for food packaging
- PPC STATEMENT:** PPC recommends that converters contact their ink suppliers to discuss options and to obtain the latest technical information. Current information points to the need for a tested and approved functional barrier to be used in food packaging applications to prevent UV ink migration. In cases where functional barriers cannot be used, ink suppliers can recommend alternatives.
- CURRENT STATUS:** Currently, PPC is unaware of any regulatory action in the U.S. regarding this issue. The European Food Safety Authority is re-evaluating their standards.
- CONTACT:** **Lou Kornet**
Vice President & Chief of Staff
lou@ppcnet.org
413.686.9180
- BACKGROUND:** In March 2009 at the PPC Outlook & Strategies Conference, Jan Cardon, executive director of the European Carton Makers Association (ECMA), discussed activity in the European packing industry regarding the use of UV inks and coatings for food packaging.
- At issue was a European finding of the presence of a photoinitiator in packaged food that was attributed to migration through the substrate. ECMA recommended that its members stop using UV inks and coatings for food packaging, after traces of a chemical photoinitiator were detected in packaged breakfast foods in Europe. The presence of the chemical was attributed to migration of the ink through the substrate. Initial information suggests that ink migration can be avoided with the proper use of a functional barrier, as recommended by UV ink suppliers.

FAQs:

What is a photoinitiator and how does it work?

A photoinitiator is a chemical substance used in inks and coatings cured with ultraviolet light. Two such chemicals, benzophenone (BP) and hydroxybenzophenone, are commonly used in food packaging. They bear a close resemblance to a third chemical, 4-methylbenzophenone (MBP). Because only a small portion of the chemical is used up during the curing process, it can potentially remain in printed material, but it typically does not come in contact with foods if used properly along with an impermeable barrier.

What happened in the European case?

Earlier this year, a German customer of a Belgian cereal manufacturer discovered traces of 4-methylbenzophenone (4MBP) in a breakfast snack. The finding triggered recalls of certain cereals in Europe and investigations by the European Food Safety Authority and the European Commission. According to news reports, the problem likely arose due to lack of communication between cereal manufacturers and packaging companies, and a failure to use an impermeable barrier to bag breakfast foods.

What is the current status of the European cereals case?

Following the cereals case, the European Food Safety Authority asked a special panel to evaluate the health risks of 4-methylbenzophenone and to reevaluate the standards for daily intake levels of benzophenone as well.

The EFSA concluded that there are no health risks from the short-term consumption of breakfast cereals contaminated with 4-methylbenzophenone at the levels reported earlier this year. However, it cautioned that more data is needed for a full risk assessment and to establish a threshold for tolerable daily intake.

The EFSA also set a new, higher threshold for the tolerable daily intake of benzophenone: no more than 0.03 mg per kilogram of bodyweight. The EFSA said there was insufficient data to evaluate a threshold for hydroxybenzophenone.

How can I find out more information?

Contact Lou Kornet at 413.686.9180 or lou@ppcnet.org.